```
{
 "cells": [
  {
   "cell_type": "code",
   "execution_count": 1,
   "id": "c8dfebb3",
   "metadata": {
    "execution": {
     "iopub.execute_input": "2022-10-25T06:56:13.470484Z",
     "iopub.status.busy": "2022-10-25T06:56:13.469833Z",
     "iopub.status.idle": "2022-10-25T06:57:22.615465Z",
     "shell.execute_reply": "2022-10-25T06:57:22.611998Z"
    },
    "papermill": {
     "duration": 69.16216,
     "end_time": "2022-10-25T06:57:22.618152",
     "exception": false,
     "start_time": "2022-10-25T06:56:13.455992",
     "status": "completed"
    },
    "tags": []
   },
   "outputs": [
    {
     "name": "stderr",
     "output_type": "stream",
     "text": [
      "[nltk_data] Error loading stopwords: <urlopen error [Errno -3]\n",
      "[nltk_data]     Temporary failure in name resolution>\n",
      "[nltk_data] Error loading wordnet: <urlopen error [Errno -3]
Temporary\n",
      "[nltk_data]     failure in name resolution>\n"
     ]
    },
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "\u001b[2m\u001b[1m\u001b[32m\n",
      "NECESSARY LIBRARIES WERE SUCCESFULLY IMPORTED...\u001b[0m\n"
     ]
    },
    {
     "name": "stderr",
     "output_type": "stream",
     "text": [
      "[nltk_data] Error loading omw-1.4: <urlopen error [Errno -3]
Temporary\n",
      "[nltk_data]     failure in name resolution>\n"
     ]
    }
   ],
   "source": [
    "import numpy as np\n",
    "import pandas as pd\n",
    "import seaborn as sns\n",
    "import matplotlib.pyplot as plt\n",
    "import plotly.express as px\n",
```

```
    "import re, string, unicodedata\n",
    "from string import punctuation\n",
    "from termcolor import colored\n",
    "from collections import Counter\n",
    "\n",
    "from sklearn.preprocessing import LabelBinarizer\n",
    "from sklearn.metrics import classification_report,confusion_matrix,
accuracy_score\n",
    "from sklearn.model_selection import train_test_split\n",
    "from sklearn.preprocessing import LabelEncoder\n",
    "\n",
    "import keras\n",
    "import tensorflow as tf\n",
    "from keras.preprocessing import text, sequence\n",
    "from keras.models import Sequential\n",
    "from keras.layers import Dense,Embedding,LSTM,Dropout\n",
    "from keras.callbacks import ReduceLROnPlateau\n",
    "from tensorflow.keras.preprocessing.text import Tokenizer\n",
    "\n",
    "import nltk\n",
    "from nltk.corpus import stopwords\n",
    "from textblob import Word\n",
    "nltk.download('stopwords')\n",
    "nltk.download('wordnet')\n",
    "nltk.download('omw-1.4')\n",
    "from nltk.stem.porter import PorterStemmer\n",
    "from wordcloud import WordCloud,STOPWORDS\n",
    "from nltk.stem import WordNetLemmatizer\n",
    "from nltk.tokenize import word_tokenize, sent_tokenize\n",
    "from nltk import pos_tag\n",
    "from nltk.corpus import wordnet\n",
    "\n",
    "from warnings import filterwarnings\n",
    "filterwarnings('ignore')\n",
    "\n",
    "from sklearn import set_config\n",
    "set_config(print_changed_only = False)\n",
    "\n",
    "#to see full text:\n",
    "pd.set_option(\"display.max_colwidth\", -1)\n",
    "\n",
    "print(colored(\"\\nNECESSARY LIBRARIES WERE SUCCESFULLY
IMPORTED...\", color = \"green\", attrs = [\"bold\", \"dark\"]))"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 2,
   "id": "99e14759",
   "metadata": {
    "execution": {
     "iopub.execute_input": "2022-10-25T06:57:22.640874Z",
     "iopub.status.busy": "2022-10-25T06:57:22.639655Z",
     "iopub.status.idle": "2022-10-25T06:57:22.689417Z",
     "shell.execute_reply": "2022-10-25T06:57:22.687658Z"
    },
    "papermill": {
     "duration": 0.064341,
```

```
     "end_time": "2022-10-25T06:57:22.692692",
     "exception": false,
     "start_time": "2022-10-25T06:57:22.628351",
     "status": "completed"
    },
    "tags": []
   },
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "\u001b[2m\u001b[1m\u001b[32m\n",
      "DATASETS WERE SUCCESFULLY LOADED...\u001b[0m\n"
     ]
    }
   ],
   "source": [
    "data = pd.read_csv(\"../input/sms-spam-collection-
dataset/spam.csv\", encoding = \"ISO-8859-1\", engine = \"python\")\n",
    "\n",
    "print(colored(\"\\nDATASETS WERE SUCCESFULLY LOADED...\",  color =
\"green\", attrs = [\"bold\", \"dark\"]))"
   ]
  },
  {
   "cell_type": "markdown",
   "id": "feacf8dc",
   "metadata": {
    "papermill": {
     "duration": 0.009765,
     "end_time": "2022-10-25T06:57:22.713703",
     "exception": false,
     "start_time": "2022-10-25T06:57:22.703938",
     "status": "completed"
    },
    "tags": []
   },
   "source": [
    "### <span style = \"background:#410F01; border:black solid; font-
size:100%; color:#fff; border-radius:10px;\">Look at the dataset</span>"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 3,
   "id": "1b89ccc7",
   "metadata": {
    "execution": {
     "iopub.execute_input": "2022-10-25T06:57:22.737093Z",
     "iopub.status.busy": "2022-10-25T06:57:22.736305Z",
     "iopub.status.idle": "2022-10-25T06:57:22.757665Z",
     "shell.execute_reply": "2022-10-25T06:57:22.756478Z"
    },
    "papermill": {
     "duration": 0.036411,
     "end_time": "2022-10-25T06:57:22.760094",
     "exception": false,
```

```
     "start_time": "2022-10-25T06:57:22.723683",
     "status": "completed"
    },
    "tags": []
   },
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>v1</th>\n",
       "      <th>v2</th>\n",
       "      <th>Unnamed: 2</th>\n",
       "      <th>Unnamed: 3</th>\n",
       "      <th>Unnamed: 4</th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>0</th>\n",
       "      <td>ham</td>\n",
       "      <td>Go until jurong point, crazy.. Available only in bugis
n great world la e buffet... Cine there got amore wat...</td>\n",
       "      <td>NaN</td>\n",
       "      <td>NaN</td>\n",
       "      <td>NaN</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>1</th>\n",
       "      <td>ham</td>\n",
       "      <td>Ok lar... Joking wif u oni...</td>\n",
       "      <td>NaN</td>\n",
       "      <td>NaN</td>\n",
       "      <td>NaN</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>2</th>\n",
       "      <td>spam</td>\n",
       "      <td>Free entry in 2 a wkly comp to win FA Cup final tkts
21st May 2005. Text FA to 87121 to receive entry question(std txt
rate)T&amp;amp;C's apply 08452810075over18's</td>\n",
```

```
       "      <td>NaN</td>\n",
       "      <td>NaN</td>\n",
       "      <td>NaN</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>3</th>\n",
       "      <td>ham</td>\n",
       "      <td>U dun say so early hor... U c already then
say...</td>\n",
       "      <td>NaN</td>\n",
       "      <td>NaN</td>\n",
       "      <td>NaN</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>4</th>\n",
       "      <td>ham</td>\n",
       "      <td>Nah I don't think he goes to usf, he lives around here
though</td>\n",
       "      <td>NaN</td>\n",
       "      <td>NaN</td>\n",
       "      <td>NaN</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "     v1  \\\n",
       "0  ham    \n",
       "1  ham    \n",
       "2  spam   \n",
       "3  ham    \n",
       "4  ham    \n",
       "\n",
       "
v2  \\\n",
       "0  Go until jurong point, crazy.. Available only in bugis n great
world la e buffet... Cine there got amore wat...
\n",
       "1  Ok lar... Joking wif u
oni...
\n",
       "2  Free entry in 2 a wkly comp to win FA Cup final tkts 21st May
2005. Text FA to 87121 to receive entry question(std txt rate)T&C's apply
08452810075over18's   \n",
       "3  U dun say so early hor... U c already then say...
\n",
       "4  Nah I don't think he goes to usf, he lives around here
though
\n",
       "\n",
       "  Unnamed: 2 Unnamed: 3 Unnamed: 4  \n",
       "0  NaN        NaN        NaN        \n",
       "1  NaN        NaN        NaN        \n",
       "2  NaN        NaN        NaN        \n",
       "3  NaN        NaN        NaN        \n",
       "4  NaN        NaN        NaN        "
      ]
```

```
     },
     "execution_count": 3,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "data.head()"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 4,
   "id": "c1fb51b6",
   "metadata": {
    "execution": {
     "iopub.execute_input": "2022-10-25T06:57:22.782551Z",
     "iopub.status.busy": "2022-10-25T06:57:22.782178Z",
     "iopub.status.idle": "2022-10-25T06:57:22.797713Z",
     "shell.execute_reply": "2022-10-25T06:57:22.796327Z"
    },
    "papermill": {
     "duration": 0.029821,
     "end_time": "2022-10-25T06:57:22.800191",
     "exception": false,
     "start_time": "2022-10-25T06:57:22.770370",
     "status": "completed"
    },
    "tags": []
   },
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "\u001b[2m\u001b[1m\u001b[32m\n",
      "OPERATIONS ON DATASETS WERE SUCCESFULLY COMPLETED...\u001b[0m\n"
     ]
    }
   ],
   "source": [
    "#rename dataset columns\n",
    "data.rename(columns = {\"v1\": \"target\", \"v2\": \"text\"}, 
inplace = True)\n",
    "\n",
    "#drop unnecessary columns\n",
    "data.drop([\"Unnamed: 2\",\"Unnamed: 3\", \"Unnamed: 4\"], axis = 1, 
inplace = True)\n",
    "\n",
    "print(colored(\"\\nOPERATIONS ON DATASETS WERE SUCCESFULLY 
COMPLETED...\",  color = \"green\", attrs = [\"bold\", \"dark\"]))"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 5,
   "id": "8da61333",
   "metadata": {
```

```
    "execution": {
     "iopub.execute_input": "2022-10-25T06:57:22.822853Z",
     "iopub.status.busy": "2022-10-25T06:57:22.822486Z",
     "iopub.status.idle": "2022-10-25T06:57:22.833231Z",
     "shell.execute_reply": "2022-10-25T06:57:22.832112Z"
    },
    "papermill": {
     "duration": 0.02496,
     "end_time": "2022-10-25T06:57:22.835489",
     "exception": false,
     "start_time": "2022-10-25T06:57:22.810529",
     "status": "completed"
    },
    "tags": []
   },
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>target</th>\n",
       "      <th>text</th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>0</th>\n",
       "      <td>ham</td>\n",
       "      <td>Go until jurong point, crazy.. Available only in bugis
n great world la e buffet... Cine there got amore wat...</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>1</th>\n",
       "      <td>ham</td>\n",
       "      <td>Ok lar... Joking wif u oni...</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>2</th>\n",
       "      <td>spam</td>\n",
       "
```

```
       "      <td>Free entry in 2 a wkly comp to win FA Cup final tkts
21st May 2005. Text FA to 87121 to receive entry question(std txt
rate)T&amp;amp;C's apply 08452810075over18's</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>3</th>\n",
       "      <td>ham</td>\n",
       "      <td>U dun say so early hor... U c already then
say...</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>4</th>\n",
       "      <td>ham</td>\n",
       "      <td>Nah I don't think he goes to usf, he lives around here
though</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "  target  \\\n",
       "0  ham     \n",
       "1  ham     \n",
       "2  spam    \n",
       "3  ham     \n",
       "4  ham     \n",
       "\n",
       "
text  \n",
       "0  Go until jurong point, crazy.. Available only in bugis n great
world la e buffet... Cine there got amore wat...
\n",
       "1  Ok lar... Joking wif u
oni...
\n",
       "2  Free entry in 2 a wkly comp to win FA Cup final tkts 21st May
2005. Text FA to 87121 to receive entry question(std txt rate)T&C's apply
08452810075over18's  \n",
       "3  U dun say so early hor... U c already then say...
\n",
       "4  Nah I don't think he goes to usf, he lives around here
though
"
      ]
     },
     "execution_count": 5,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "data.head()"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 6,
```

```
 "id": "b159c84d",
 "metadata": {
  "execution": {
   "iopub.execute_input": "2022-10-25T06:57:22.858628Z",
   "iopub.status.busy": "2022-10-25T06:57:22.858233Z",
   "iopub.status.idle": "2022-10-25T06:57:22.877346Z",
   "shell.execute_reply": "2022-10-25T06:57:22.875820Z"
  },
  "papermill": {
   "duration": 0.034605,
   "end_time": "2022-10-25T06:57:22.880639",
   "exception": false,
   "start_time": "2022-10-25T06:57:22.846034",
   "status": "completed"
  },
  "tags": []
 },
 "outputs": [
  {
   "name": "stdout",
   "output_type": "stream",
   "text": [
    "<class 'pandas.core.frame.DataFrame'>\n",
    "RangeIndex: 5572 entries, 0 to 5571\n",
    "Data columns (total 2 columns):\n",
    " #   Column  Non-Null Count  Dtype \n",
    "---  ------  --------------  ----- \n",
    " 0   target  5572 non-null   object\n",
    " 1   text    5572 non-null   object\n",
    "dtypes: object(2)\n",
    "memory usage: 87.2+ KB\n"
   ]
  }
 ],
 "source": [
  "data.info(memory_usage = True, verbose = True)"
 ]
},
{
 "cell_type": "code",
 "execution_count": 7,
 "id": "22fd4667",
 "metadata": {
  "execution": {
   "iopub.execute_input": "2022-10-25T06:57:22.904491Z",
   "iopub.status.busy": "2022-10-25T06:57:22.904118Z",
   "iopub.status.idle": "2022-10-25T06:57:22.914979Z",
   "shell.execute_reply": "2022-10-25T06:57:22.913596Z"
  },
  "papermill": {
   "duration": 0.025212,
   "end_time": "2022-10-25T06:57:22.917135",
   "exception": false,
   "start_time": "2022-10-25T06:57:22.891923",
   "status": "completed"
  },
  "tags": []
 },
```

```
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "\u001b[2m\u001b[1m\u001b[32mThere are 403 duplicated values in the
dataset\u001b[0m\n"
     ]
    }
   ],
   "source": [
    "print(colored(\"There are {} duplicated values in the
dataset\".format(data.duplicated().sum()), color = \"green\", attrs =
[\"bold\", \"dark\"]))"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 8,
   "id": "8366d31d",
   "metadata": {
    "execution": {
     "iopub.execute_input": "2022-10-25T06:57:22.940416Z",
     "iopub.status.busy": "2022-10-25T06:57:22.939912Z",
     "iopub.status.idle": "2022-10-25T06:57:22.951016Z",
     "shell.execute_reply": "2022-10-25T06:57:22.949690Z"
    },
    "papermill": {
     "duration": 0.025662,
     "end_time": "2022-10-25T06:57:22.953420",
     "exception": false,
     "start_time": "2022-10-25T06:57:22.927758",
     "status": "completed"
    },
    "tags": []
   },
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "\u001b[2m\u001b[1m\u001b[32m\n",
      "DUPLICATED VALUES WERE SUCCESFULLY DROPPED...\u001b[0m\n"
     ]
    }
   ],
   "source": [
    "data.drop_duplicates(inplace = True)\n",
    "\n",
    "print(colored(\"\\nDUPLICATED VALUES WERE SUCCESFULLY DROPPED...\",
color = \"green\", attrs = [\"bold\", \"dark\"]))"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 9,
   "id": "e6165596",
   "metadata": {
```

```
  "execution": {
   "iopub.execute_input": "2022-10-25T06:57:22.976487Z",
   "iopub.status.busy": "2022-10-25T06:57:22.976027Z",
   "iopub.status.idle": "2022-10-25T06:57:22.987356Z",
   "shell.execute_reply": "2022-10-25T06:57:22.986267Z"
  },
  "papermill": {
   "duration": 0.025566,
   "end_time": "2022-10-25T06:57:22.989684",
   "exception": false,
   "start_time": "2022-10-25T06:57:22.964118",
   "status": "completed"
  },
  "tags": []
 },
 "outputs": [
  {
   "data": {
    "text/plain": [
     "target\n",
     "ham     4516\n",
     "spam    653 \n",
     "Name: text, dtype: int64"
    ]
   },
   "execution_count": 9,
   "metadata": {},
   "output_type": "execute_result"
  }
 ],
 "source": [
  "grouped_target = data.groupby(\"target\").count()\n",
  "grouped_target[\"text\"]"
 ]
},
{
 "cell_type": "code",
 "execution_count": 10,
 "id": "f090a982",
 "metadata": {
  "execution": {
   "iopub.execute_input": "2022-10-25T06:57:23.013136Z",
   "iopub.status.busy": "2022-10-25T06:57:23.012702Z",
   "iopub.status.idle": "2022-10-25T06:57:23.022896Z",
   "shell.execute_reply": "2022-10-25T06:57:23.021836Z"
  },
  "papermill": {
   "duration": 0.024597,
   "end_time": "2022-10-25T06:57:23.025255",
   "exception": false,
   "start_time": "2022-10-25T06:57:23.000658",
   "status": "completed"
  },
  "tags": []
 },
 "outputs": [
  {
   "data": {
```

"text/plain": [
"target   0\n",
"text   0\n",
"dtype: int64"
]
},
"execution_count": 10,
"metadata": {},
"output_type": "execute_result"
}
],
"source": [
"data.isnull().sum()"
]
},
{
"cell_type": "code",
"execution_count": 11,
"id": "57c3a760",
"metadata": {
"execution": {
"iopub.execute_input": "2022-10-25T06:57:23.049228Z",
"iopub.status.busy": "2022-10-25T06:57:23.048169Z",
"iopub.status.idle": "2022-10-25T06:57:23.270177Z",
"shell.execute_reply": "2022-10-25T06:57:23.269285Z"
},
"papermill": {
"duration": 0.236181,
"end_time": "2022-10-25T06:57:23.272320",
"exception": false,
"start_time": "2022-10-25T06:57:23.036139",
"status": "completed"
},
"tags": []
},
"outputs": [
{
"data": {
"image/png":
"iVBORw0KGgoAAAANSUhEUgAAAfoAAAHiCAYAAAAAkA6/AAAAOXRFWHRTb2Z0d2FyZQBNYXRw
bG90bGliIHZlcnNpb24zLjUuMiwgaHR0cHM6Ly9tYXRwbG90bGliLm9yZy8qNh9FAAAACXBIW
XMAAAsTAAALEwEAmpwYAAAsvklEQVR4nO3deVxV9b7/8fcWPKQxCyoBBwfMHFBLDG2Q1HDKsF
seHAtvHm28mU36K03NHmqW1elmGR1vUqFk1pE0p6ys7DocstTwWmigQh4cYlJUpu/vDx+th6i
EJ90g317Pf2yvvfZan7XZe7/2BLmMMUYAAMBKDep6AAAA4D6EHgAAixF6AAAsRugBALAYoQcA
wGKEHgAAixH6P5hp06Zp1KhRtbrP4cOHa9myZZKkhQsX6oYbbbqjV/dtk+/btuu66535znby8P
PXs2VM+Pj569NFHa2ky97r33ns1Y8aMWt3n5MmTFRQUp0bNm9fqfuubmTNn6q9//etr69G
hNnjy52vNdLpd27959Xtvq3LmzQkJC9NJLL53X+n9kN5CixYtUnR0tLy9vdVRUqIBAwZow4Y
NdTLL9u3bNt9bNg0ePLhO9m+bTp06yd/fX8uXL692naSkJAUFBamoqEhz586txencZ/78+ncZ
ZUqt7W/fvn2aO3eudu/eudu7cqX/9619nnb9+/XrddNNNzul/J1DucOb+z5zPz88888kn9/e9/r5V9n
W7btm168803NX5NX369Frrd43NNX369Frfd31fff7S0tLqZJ433nhDi2kbun1
eOlMvlqpP9/1l5eV1PUK1Ro4cqTfeeKPa8/fu3av27ftrdzqdi3b5+aNGmipk2bun1
fxhhVVla6xz5mXZUFmPbmEbvAbbnYtlb7xlMsi7BsoB+bodYbWp3:/;zeR:1G-1kZZxLFFNOmyo
w2+9Vc8///w5L/OXv/xFzZs3l5+fn3r27KmMjAznvJUrV6p9+/by8fFRaGioXnjhBUnS4cOHN
WjQIPn7+yswMFA33nhjtQ9Uq1atUmxs7FnLH3vsMQUEBKhly5ZatWqVs/ytt95Su3bt5OPjo1
atWlUJ2vr16xUWFqY5c+aoadOmCgkJ0bJy7Ry5UpdeeWVCgwM1MyZM3/z+rnrrrrsUHBysiIg
IPfvss87cCxcu1PXXX68JEyaoSZMmmjZt2lmLX37XXl6xUUHtKXsZKMXt00xppKaW6SKn9SMonLbz5mNUhKOJi6Yu+A2Rt
KSlJV1xxUgu6btJ4XEJTlrUGx0uRYMC0pSj8WOy6z3Ynvdgr
bouuuuk6+vrxISEqqsf9NNN+nTTz/VyZMnz5px
ZVsUgJGI3UEAkAeJd1DDtL3qq2ZXKmiEQY7lH7P3YE60/y15NpL9Ttz6+iMStGZMnHp4czG
/bouuuuk6+vrxISEqqsf9NNN+nTTz/VyZMnz5px9OjRSk5O1pw5c+Tt7a2rr/YlrsXJRMnM5fmWlmWEjpqTI

aNGiVfX18tXLhQhYWFGjNmjEJCQhQaGqrJkyc7D5YVFRV67LHHFBQUpFatWmnevHlyuVzOg3q
LFi20bt06Z59nfhy0adMmXXfddfL391fnzp21fv36KrNPmTJF119/vXx8fNS3b18dPnzYOX/D
hg3OZcPDw7Vw4ULnuE5/y3fFihXq0qWL/P39dd1112n79u3Oec8995xCQ0Pl4+Ojtm3b6tNPP
z3HraH628O6desUFxenn3/+Wd7e3ho9evQ5L/+rnj17Sjr1VrK3t7fee+895efna9CgQQoODl
ZAQIAGDRqknJycKtfDU089peuvv16NGzfWTz/9pLVr16pt27by8/PT/fffr9jY2CqvlP/nf/5
H7dq1U0BAgPr166e9e/dWu//fMmDAAL366qtVlnXr166pt27by8/PT/fffr9jY2CqvlP/nf/5
+spZ71y3pTN//r/1mCKdevyIi4uTj4+PYmNjneM408mTJ/XYY4/pz3/+s5o1a6Z7771Xx48fr
7JOgwanElbXTzgueQbWWLVqlfHw8DBlZWXVrjN16lQzcuRI5/SCBQtMUVGROXAFzrp3L
mzc17z5s3Nl19+aYwx5pdffjHffPONMcaYSZMmmXvuuceUlpaa0tJS8+WXX5rKysqz9nX06FE
jyRw8eNBZ9tZbxbxlPT0+TlJRkysvLzWuvvWZCQkKcy69YscLs3r3bVZmvXr15tGjRo5+/38
88+Nh4eHmT59uiktLTVJSUkmCjIDB8+3BQVFZnvv//eXfEhbZZeann34657HfeeedJj4+3hQV
ZmsrCzTpk0b8/e//92Zy8PDw7zzyyumrKzmKzMlJSUnHX57t27m7fffftsYY0xxbHZuHGjMcaYrK
wsI8kMGzbMHD161Gzfvt0EBQWZTz75xBhjTHp6utm4caMpKyszmVlZ5qqqrrjIvvfSSs11JJj4
+3hQWFprvv//e/OlPfzK9e/c2e/bsMQUFBaZdu3Zm4cKFVbx8fEx27ZtO+dxJiYmmqeeeso5
PXXqVOPp6Wn+8Y9/mIqKClNSUmJuu+02M27cOdu+2cOHP06FGTl5dnunXrZubPn2+MMeb11183bdu2N
fv27TNHjhwwN910k3K5HkL4Hk3K4iIiKcY/t1+7/epnJyckxgYKD5+OOPFhVm7dq0JDAx0bgOxsb
GmVatW5ocffjAllJSUmNjbWTJw40RhYaZ2tvH29jaLFi0yppaWl5vDhw2bWtbw8tHdAx0OxsbxsO
DzaZNm0x5eb1ZuHChiYiIMCdOnDC7du0yYYWFhJjc31/nZ7N69nZXz++eQcmNDT0nJc7F0km
MzPTOX348GGzdOlSc+zYMVNUVGSGDBliBBg8e7JwfGxtrwsPDzfffff2f2/KysrMwYMHjY+Pj/ngg
w9MWVmZefnll42np6dd58803jTHGLFu2Ru3drs3LnTlJWVmRkzZpgePXpUu//fkpycbK677j
rndEZGhvHz8zMnTpwwxhjzzzjvvmMOHD5uysjLzwgsvmGbNmpjLzwgsvmGbNmpnjx48bY859W/p3HlMSExONt7e
3+eKLL8yJEyfMQw89ZK6//vpzHsMSWonyzZ6K//vpzHsfDDz9sbr31VnFkyBFTVFRkDBg0aZLCZZ+CZ+lWEpKSsxl1l1m
li9ff17H/kdF6C3y7rvvvmmmbNmv3mOmfeKU+Xn59vJJmCggJjjDh4eFm/vz5prCwsMp6U6ZMM
fHx8TU+sOTk5BhJzoEEMaeC2rpla+f0sWPHjCBuWXXzbGnHrwvIeyyy0x5eb
kxxpiioiIjyWzatMlZ/5prrjH/+Mc/ztpOeXm5I1NyHCWzZ8/38TGxjpzhYeH/+bx3Hj
jjebpp582hw4dqrL819D3/3//9n7Ps8ccfN3ffffc5t/PSSy+Z+Z2267zTktyWzYsKHKMcyePds5
/cgjj5jx48d2cX2cYVV1xxvj3iI3Nu/1yhv/HGG53T//rXv8yf/vSnKk9mFi1aTk9mFi1aZG666SZjj6DG9e
vUyr7/+unPemjVrZjT9++fZ0nKrGxsWbGjBnOefmfPmzTP9+vUzxhgxgc+bMKt
dLdcd07733msmTJ1c5/8/orrzTr1683mZmZmJjg42HzyySemtLT0nNsyububbw4WG/kzffvut8ff
3d07HxsaaKVOmOKeTk5NN9+7dndOV1ZUMLCzMCX3//v2dJ5hGFHNRUWEaNwpksrOzz2v/pysq
KjKNGzd2bnd2zi0y1vva//k/Pdd98ZY86+Lf267HwfUxITE83Qo0UDBgsMvv
n37qhxHZWWlady4cZUNaf/7v80V1wsa/7v/9rWrocdY+XnnlfzNyhzVoiPsM//LnS/Pn/f
WFJk2apNatW8vX11cxESQ1etCYmNjtXHBgttQvEsOxZGmM4Wd01LZ4V3GJLZ2ZbFbOz59tZRMkBM
S7Nmzz79l9f39/9SRVwxG3cXt/i7lxyh48aSpKNHjj0o69VZ/9+7dFrgYKH9/f61cubLkW7tNjSR
h4eHJKl1RoaSpJGbnnNhnN2rRMy/W6Q4fDPqyyyjJFREQ4yyIpSbm+ucRBm+ucDg8Pr+6qiQtWLBAP
/74o6666ip169iffNRjbqQE5vMy9sy7r/+e68U+Lz3hsDmb3Z7w6r3/6Lx8o/v23gL
MqLi52rt/zxfbse/vfxDDUM5mZnJ5Ne/Duee95vCmCQtWTv7y9/r3/dc889OnjwoCTp555/fty5z+vYvXd/uZvX9
19/fXhg0hdODDAWedM3/+v3xD71bp16ePhavfoXh9m1Rx+WdOmPxT7Ot1QTpPPxz+ufzEyZqaf7v
pk01bNgw5+dwuwv5PVYJkPpIS3XXPPYPvYzAJ1QaMf9n1lwGtNdlDuS3+v5h3ZTWZKJf2mSAE3d8
ePHPO8bGGBpgoV8zmtyHxqLLJ3Km5gR3l6EddXlRqUm5W4NDUFMKIwEHRSmhbwvxFNZUJWZ0PEI0zVUqrpGuUQ0L2Y
tv3U9qekw58/Le3t4K4KDAw862d06NAhhlZSUqGwx+3/fX4cOHaqyxnAmQ0nJhHc9nzH33Zon3g4H2q0
77b99XfxREHqL90jRQ15eXs6vstVk0aJFSktL70p1a61RYWKjzs7GxJp/74C3E7ndubWlqaDh48
qNtuu00JCQmQ9j1Z04J07Vz/99M++ugjvfji+f8hPTyyy9X69ZxOq9dPhrCMNT07P057XdPnb8Q0D
x57TH15eSSoKNDAgQWOdeS5UEFUFCQGjZs5WOXzwH379ik0NNXdMXDtu0aaP0PFz1ixXkJfixx4mMA
YMGaJjxH4+4L5+/X4q4b2HMdm7BvrCyybdqmCFXUs8qHqj+3EhdcVoJjp7/Y+mHvFaZf9ueUfPj
OP7EbzWp3bL0hLAX0OHDkK1qAOUEFBgY6QipzPUKNCQ4s46ldndvnV11KcgIQLS2jV8sbRnr
CxoKdOZY2MKU2aNKnCGGxPDw7Vnz57zWu4+pRpVNzpN6m+0SoSpcxshTdCrRl1Ka9KlJoBYJJ
8/axvncHi7E3Llz9cMPP0Ja9L19+KQk6BzEKJFvrMfGG0Ca7a2ZM5vtRTPdxzIBQAtmEGgYxGkU
5+/Hi5uoKtZQqUQTF5ubyaYW5oGjxwOeXa5HgnvfuuP3a0YupfBpPdS1wMMrbN5W0w1lQp5pDncL8Zd6r
pMUWqej85evSofvnlF+e8quLeoTi8QVxe0eBy+qVbgOPBnoQf2Gwc6Gf91+ujnsb0bnrK5pk
iJ+fn5555hk98MADWrZsmUpVxX11ZBdWn7ZXxs1GaYQu7GhnoPnZFN2EhapcMzrB8IhzTp1DfP
qqUlBQVFhaqYcOG8vX1db6svFkPzHmyKTnJtp3SUnVvaBvbu7mG3TuZHdFr3R54e2yfpvdkGaHgq5
oODpanp6dWrVqltX7Xmn0LtiWPWm5vEoCRdYqtZjmSpKPnoyTYjkIzMVaRcAHqWiceavDvndcvoZ3m7jNh
0cF5Nn37cM2bbMUElJiTIyMvTWW29p6NChkk5dz76+vL29twauXbv0+ruvXX9cbfPHFF+rbdu7e8
vLx+1+VDQkLUt29fPfrooqKKlJZHq0+M0n+k9lUG7uH4zJ9yYTnLyZz
KxM6enpWrp0qXPeqFGjtyFjtHz5cq1YqFkRgZiRFcbdqIT4Nrpi3kFeDNIYzqTWrVunJNUqBUFn68/XHEOHH
F333131npjx47V/xuqtNpnzzZhlJdOzYMX388ccqzSp8r8n48OwpkonvEi5m8aDt31+T5uZcdgpkNaDdGp3qnntk
xbg+Na9asmXS766SfndHFxsRo1aJRxiR/f3/3/98sVnNnV5Ap3kDy4ka2C233KIdQbJlKDi8v17x586v586s5o8v36

3ns1a9Ys58lYYWGh3n///Wr3X5OBAwdq7969evrppzV06FDnOiouLpanp6eCg4NVXl6uZ555R
kVFRee93d96TPnVypUrtWHDBpWWlmrKlCnq3r37We8SNGjQQGPHjtWECROcd5pyc3O1Zs2aKu
uVlZVJ0u++L/xREHrLPProo3rxxRf17LPPKjg4WOHh4Xr11Vd12223nbXuXXfdpYiICIWGhqp
9+/bq3r17lfPfeecdtWjRQr6+vpo/f75SUlIkSZmZmbr55pvl7e2tHj166P7773deEZxp3Lhx
SklJOa9XsD4+PnrllVeUkJCggIAALVq0SPHx8f/+lVCN//7v/9bll+uVq1a6YYbbbtCIESN09
913n/flV69erQ4dOsjb21vjx49Xamqq8/GBJMXGxioyMl9+vTRY489pr59+0o69VbookWL5O
Pjo7FjxzpPAH6vlJQU3XvvvRe0jbfffflulpaVq3769AgICNGTIEOft9bFjx6pfv37q3Lmzrrrn
mGt1+++1VLjtjxgzt2bNHHAQEBmjp1qkaMGOGcFx4errS0NM2cOdOdO5/T3//PPn9etjf/7zn7Vy
5UrNnTtXgYGB6tKli7Zt23bWetHR0XrzzTf14IMPKiAgQJGRkc6380+ePPKl0JkyY5f+jm4MGDm
jVr1jn3d6G3h9NNmzZNiYmJ8vf315IlS/Twww/r+PHjCgoKUvfu3dW/f//fvHxQUJDef/99Pf
HEE2rSpIl27typ6OhoJ2D/8R//oYkTJ2rYsGHy9fVVx44dq/y2ypn7r4rsmXl5duv/12rVu3rsr
Pr1+/furfv7+uvPJKRURE6LLLLqvxI63T1f1fSYIp16x2X69OkKDAzUN998o3ffecec23ruuecU
GRmp7t27y9fXVzfffLN++OGHkuv8++lFIdS80cIrLXIz3RYHfMGLECCUkJJzzyYYNsrOz1bJS
5WVlcnT09Ot+9q+fbvuuece5/sStaE2jw+nVFZWiwsTCkpKdU+iYa0ZMkSPfjgg86rfpwb91
q43aJFi+p6BGt06tSpViOrFxMSoUaNGev7552WMevecrYpzS+tWtXFRYW6rnnnnnqvrUS5
5hB4ALgEbN27UiBEjnI9Uli1bVuWjrFZ3SVR3QMAYDG+wQAAgMUIPQAAFrPzUIqMfQHYqqOqY
oCDnLzIBAPHkJ2dip5Unp5e12MAAFBroqj7mct+4BALAYoQcwAwCAwGKEHgAAi1ArcjVCQJKh
xF6AAAsRugBALAYoQcwAwGKEHgAAixF6AAAsRugBALAYoQcwAwGKEHgAAixF6AAAsRugBALAYoQ
cAwGKEHgAAi3nW9QD1zeYoj7oeAbhgMTsq6noEAEWV/Q
AAFiM0AMAYDFCDwCAxQg9AAAWI/QAAFiM0AMAYDFCDwCA
xQg9AAAWI/QAAFiM0AMAYDFCDwCAxQg9AAAWI/QAAFiM0
AMAYDFCDwCAxQg9AAAWI/QAAFiM0AMAYDFCDwCAxQg9AA
AWI/QAAFiM0AMAYDFCDwCAxQg9AAAWI/QAAFiM0AMAYDG
3h76iokJXX321Bg0aJEnKyspSTEyMIiMjNXToUJWWlkqSTp48qaFDhyoyMlIxMTHKzs52tjFr
1ixFRkaqbdu2WrNmjbtHBgDAGm4P/d/+9a9fOOT1x4kRNmDBBu3fvVkBAgBYsWCBJWrBgg
QICArR7925NmDBBBEydOlCTt3LlTqampampysjI0OrVq3X//seroqLC3WMDAGAFt4Y+JydHH
76179Kkowx+uyzzRkyBBJUmiopYtWyWjtLU2JjioiRpyJAh+vTTT2WMUVpamoYNGyYvLy+
1bNlSkZGR2rJlizvHBBgDAGm4N/cMPP6w5w5c9kek3c
V+Hh4ZIkT09P+fn56ciRI1WW/+E3g8Ud3rGh
w7Vyj4BALjUebprw19//bUhISHq1at2psHHqx1K9/ZoL6xy+WSFAggjnx+vgoICl
Zeky9sW19ReQmC2Hw7/b5q13Dl8Uk5D2LLMO0k
kKDs7W6mpqerdu7dSULLUq1cvLV26VJKUnJyswdMpsdZH4O3+zmZ2aKjzVq4r1wBMN6ttew+u+9cPul+FtvRQy+25J
paam6uTJk8rKylZqauvfZad40NAIBV3PaKvjrPPfechgpSmTJ+vqq6/WmDFjEljjxozRn
XfeqcjISAUBio1NVJS1KFDh9+/by9PUVMKh9+/by9PTUvHnz5OHhOHhUdtjAwBQL7mMMaauh/i
6e7pZtb47iSQbqv5gd/IoqYJvq2sdfxgMAwGKEHgAAixF6AAAsRugBALAYoQcwAwGKEHgAAixF6
AAAsRugBALAYoQcwAwGKEHgAAixF6AAAsRugBALAYoQcwAwGKEHgAAixF6AAAsRugBALAYoQcwAw
GKEHgAAixF6AAAsRugBALAYoQcwAwGKEHgAAixF6AAAsRugBALAYoQcwAwGKEHgAAixF6AAAsRu
gBALAYoQcwAwGKEHgAAixF6AAAs5rbQnzhxQtee606d+6sTp066dp06dZZ6sDh06aOrUkZKbKwsxxcTEKDIMRIKtKsmbF
HDlVpaakk6eTJkxo6dKhgiIyMVExMj7Oxsz1uzZ1s1SZGSk2rZtqzVr1rhrZAArO020Ht5emz
zz7Ttm3b9N1132332n16tXatmOTXatmmTJk6dKkCAjQggULKUJEkLFixQQECAdu/erQkTJmix
ImSpJ07dyo1Nfbm1o1NVUZGRlavXq37779fPiXxsa/rXhAzVjCHyWuKxR0pFFZVFSklpY3tP1bmcLuLtbGjYpVzyo8Gd+/auUuckWpYk/8KQgLIWAIRBZYkWgs+XQVFiTNM/e8H+mY8L1XlkkITb3Z+wjZVqjUsWG+LArKvLVfBzyH4bbsOGMP3KMaWkZOk4Zmx6fXObKRIlC1NubDlA7xR1J2HaO+/epWFbXXx/3JFiY5Ylm7g1Ac1Zbnm9KJzQUW5Nmr8zE4pqOCwDDCQd4wEN
+fn56ciRI1WW/w3kZAADw29waeg8PD3333XfKycnRli1btGvXrFXuxAaUbJdKXGaeyf70wkyo+1mHfF70D90xCZOcHGNAaBBkfzxgHLxsXgl8eaBMFVJYvpTHQqgeEs68KSdyqcMWvyKMt8J4kcl5yeRvDmodbRF/XDM7BQOEqZ6ZM1JbksyqZiSwaFhoVNb+gsqnEfncyBZ1TxIV5JKHFRqWfVoT54ZqE3hNnW3TzUuOnM1HQ0UrVJxK90sd0Llo6pkLWhKrExM8KyoGTfAv0uYfX0Aan9MoAdKVEWgSvjLsAELr0WeyqhWXwV49GD
NgAAVvF014YPHDigxMRREVVRUqLKyUgkJCRo0aJDat2+vYcOGafLkybr66qs1ZswYSdKYMWN05
513KjIyUoGBgUpNTZUkdejQyUQQmjaddDpPT0eb+8gPQqJbb1vK8CDlDgjRiRP0P7d2MSPNNRGfezqKLsfOhVDGRnj9dmThazdDPHw2GhpfFjwBFvNUQm68lQkPwmAj/IdfN5A0+LQxTjTWPiYtM7n4iAdnHPs8Zxoq4bT2Pe1C3JJc6e+Fw1/y/GVQe3afprDnHuSDV/9NwB19ERGsK6fQbZt4sVs/QdXK/1/6k3nIZ59oWlmjgybBIXbbsEtHrDq81HyXfYXVHvHvJ9CI+o/QXAOhjE8fv+8Wj8gmHzhjQT3Yb4W7vLs6eFgsR3tqZPZDyqVtYRh8t/0qKRhfYI8IdZqKrRpHNzuDy7cuZWQ9b8yHdA2RqmLQ0krTSljc1TQyw3RHW9azMy8pl5RR0MeKQEFHP0lnxm+vT/FK8u2Ynw0W+/1iUu1jMOHgbBhbXw5/pJ5ODPt8jdnbAZTaT3ShmrmbJnn1MQmvVlr8GCVQcP6XAIW0EdCKSeJIBfABdFlpTmEpUE8GTrzR1hcY4SUJ3czBjeDPakWeyNZxaaLmhZXGJTb9IAjj1S4pVzrgHnwQpqQOMpWW
Ydm8KrhCVjTL5OLJMgvXE70xs9pzxn47z0xTrA5xkNS00tZepgk6WVmAlBOaq0Bn16nMUrmnv9XjOhO3C6fMHPCDvK5d+GnSKD1DGzV/b1BrnE9kNPUXrDBh+yXCpBDn8yrlpaTnupl4X9L1HAYBAAcOANQ3gLmTKDBVoS10yAAPpwPnnXTOsjcnr8JUfOYEQm0tqiJe7dDGyXW8RoKhKKmGIcj2ZZCF9HTfNqKMLmMBuYr0KBTiSFQXUU/5T6Ktd72qRRk/9S3n5tjvYPMFX+RJxVLV8VbzVrgGTHz7eiTqT3YzdD5F0rr8o68TyxXeNvGqtXk8zCl3iydP/n8xtI1NVFY4Mhc3thbR3sOfKn/F86DKlqu6GMHmm90KEZA6ih9fQ9YzGFkrSRU/fJ5PkBH5DGs8SDnvSvX5p7q9n7ZAbbdXaK/hJCb4+cUU4UT7Xx4KTH5QxKT8U

AsRugBALBYjaHPyso6r2UAAODSU2Po77jjjrOWDRkyxC3DAACAi8uzujN27dqljIwMFRYW6sM
PP3SWFxUV6cSJE7UyHAAAuDDVhv6HH37QihUrVFBQoOXLlzvLfXx89Oabb9bKcAAA4MJUG/rB
gwdr8ODB2rhxo3r06FGbMwEAgIukxs/omzRpoj59+qhjx46SpO3bt+vZZ591+2AAAODC1Rj6s
WPHatasWWrYsKEkqVOnTkpNTXX7YAAA4MLVGPqSkhJde+21j7ZZ5elb7jj8AALiE1Bj6oKAg7d
mzRy6XS5K0dOlShYSEuH0wAABw4Wp8aT5v3jjyNGzdOu3btUmhhoqFq2bKl33323NmYDDAAAXqMb
Qt2rVSuvWrdOxY8dUWVkpHx+f2pgLAABcBDWG/sUXXzrmZ+fn7p27aouOOy4YYAAAHCR1PgZ
fXp6uubPn6/c3Fzl5ubqjTfe0OrVqzWLYzOmbNY8cFoHWqWpsRLbvWR5f8kpAp9lSbr4GD1qGBf6
65bbrlFX375b6pbp27aonnnjC7UMCAIDfp8ZX9AcPHpSX15dzumHDhsrLy1OjRo2qLAcAAJeeG1
/Rjxw5UjExMRo8eLLAkafny5RoxYoSOHTum9u3bu31AAAADw+/1m6I0xGj16tAYR9sr85//4kjR
//nxFR0dLklJSUtw/IQAA+N1+M/QulOsDBw7Ujh07DAID6o8bP6K+55hr985//rI1ZAADA
RVbjZ/SbN29WkqIIidPn118sYI5fLpe3bt9f9fGfAAA4ALUGPo1a9bUxhwABC6eGj+j
MRsAALhANYb+888/V4ZKkjjp16uT2wQAQQlJiZKkjp16uT2wQAAwIWRbNvSvv/66IuLi
3X99dfXynAAAODCVBv6ESNGaMCAFp//+ESNGaMCAFp//+afbs2c5yHx8fBQ1spwAADgwlQbej8/P+W
nx4sW1Q8AAL1aIavz1OgAAUH8RegAALEboAQwCGKEHAMBihB4B4AAIsRegAALEboAQwCGKEHAMBihB4B4AAIsRegAALEboAQwCGKEHAMB
ihB4AAIsRegAALEboAQwCGKEHAMBihB4AAIu5LfT79+9Xr1691L59e3Xo0EF/+9vkEm//PKL
4uLi1KZNG8XFk/P1+SZIzRQw89pMjISHXq1aqTfq2Sk5OdtfIAABYx
22h9/T01Ny5c7Vz505t2rRJ8+bN044dOzRnzhxDEJ8ZmZ2e2ZMdmZZ6tOnj/P/ul+1apUyMzOVmZmppK
Qk3XfffZJOPTGYPn26fnzxRzZ26nHnn+Sk6/7tvvbU1Q6zXLVRn5hIlvT+Q1n6UNM1qGcgC1LLW8CcfHyXdsg7jrHzxvBsXFB2fEQgXGmPTA
LS1NiYqIkKTExUcuWLS8eGVRFcG0kpwpaM0UcHjYrOw11R4y5+o5e5tf1XQEeXDtVnbW1vjuOyFE
1atXu2tsAACs4lkbO8nOzta3336ra4ouKQvLhiYe3fNedDoyJbJZ8oN0cdaPm6ZKzXgwVvXBFyKCt2Qh6l/a
bnVLj9TUlKSkpKSJmxDh1y5+EAAFBvuP3LeHPtUdd9yhl19+WU2b/n9Gf/o+Ep3rLvZDjh2bs4zuzgd8Vw8LL5TUnW
aNU3p6utLT0xUcHHxxbQgkAQH3n1tCXlZjA06ryDBF0GoDeAxbnhB0PC4ZVRwBDBTxzzs+wzBf2k8
KkkJDQ7V//37nu37Vyr+2ZaFeFpzfZe7Sfs/pzyY7Bq2Bvdm2uvx+hbRb2Qr97c6n2YD4p0QvAKqQ
0ZO2NcscH+PGr87mGdr8+zsrpJJf4bvtoptwXnUjd29+
s/ztt9+WMUabNm2Sn5+fQkJC1K9fP61ld1u5bH5+fnKz8/X2rVr1a9fP3eNDQCAVdz2Gf3XX3+tsX+td
955R1FRUerSpYQf9b3gkaUXMy0aZeMaTF+ISEhK0YMECRUREaMmSJY+IXmTkxkgQMHauXSmkPqsz+xxd1sJkMUgSz33J
ZFkxoU1+udBSCpLhgrgq6pOTWOT2buLFg0MpbE2C3XuaZKyQ71ZF+4fmvNbPZmQukLuqMaOs19TtVZsTb9ehg
ICAwM1ZcpUdevDWJTZLOb9NNPZOgOWFzY2MYE/fBQFyBoOtW5M3F+UkAdw4ejHGGHyUgAn1FC8HQhEFRrvtvZ
Sq3yrutYo2odf4IUUZJbYFQJShLVhZnLZEejkQ
U9QgALrLq2sdfxgMAwGKEHgAAixF6AAAsRugBALAYoQcAwGKEHgAAixF6AAAsRugBALAYoQcA
wGKEHgAAixF6AAAsRugBALAYoQcAwGKEHgAAixF6AAAsRugBALAYoQcAwGKEHgAAixF6AAAsR
ugBALAYoQcAwGKEHgAAixF6AAAsRugBALAYoQcAwGKEHgAAixF6AAAsRugBALAYoQcAwGKEHg
AAixF6AAAsRugBALAYoQcAwGKEHgAAixF6AAAsRugBALAYoQcAwGKEHgAAixF6AAAsRugBALA
YoQcAwGKEHgAAixF6AAAsRugBALAYoQcAwGKEHgAAixF6AAAsRugBALAYoQcAwGKEHgAAixF6
AAAsRugBALAYoQcAwGKEHgAAixF6AAAsRugBALAYoQcAwGKEHgAAixF6AAAsRugBALAYoQcAw
GKEHgAAixF6AAAsRugBALAYoQcAwGKEHgAAixF6AAAsRugBALAYoQcAwGKEHgAAixF6AAAsRu
gBALAYoQcAwGKEHgAAixF6AAAsRugBALAYoQcAwGKEHgAAixF6AAAsRugBALAYoQcAwGKEHgA
Ai7kt9HfffbeaeaNm2qjh07NoUt7Ost++eUXXxcXFFqU2bNoqLi1kyRijhx56SJGRkerUqpOWLi1N+fr4kSJGRkerUqZO2bt3
XCY5OVlt2rRRmRRmzZtI3mzZdn3a7u3qnQRmjZ1n+MB5GSIKmW7V8B1Bgmc3gCGwmzNkR96+3Tzar0G8lGxq3mvO3k9CgmZwIeS3q
lWrlJmZQcmzMTCUlJem++++TJM7/dH1+ZNVQvXbSOW9QCvegtZlnsKzyGdqZvbbRhaYTVY
lpaUpMTJQkJSYmatmyZc7yu+66Sy6XS127dtW+ByNvDvbfjJI0K4NKNGOaVZkwOdoQgxaiOcwOBdFNrEDfUD+kSoPnSklf1tn9Q
AAED1avUz+ry8PIWEhEhSjmSmjdvvrry8PPOjd9fcfXV6X7trwbnP+eUDzaXBBpJQYyINBbYPZFxLwNdFgpmz2AXgq3hNVY4D0msQO0hPFz63fbVRrVCGtiqXNGHCl9JgsKPVl9f
66JtLykpSUlJSZKkQ4cOgfSDbnxWt2yzmzxVAoOoObDeTTAgBTn8nXVC/ErkcIkkqhaZZOTKkjh6bjIJ1ai/aaX2UoMGpgZyQIJuRktkazuJuU8jfqQaSX1
0ehoaHVLj+XcePGKT09Xenp6QoKCnL7kIB2gmVqR6RzXDiSDbvJUYPPZQrgOXP9X32R97iK7JqDm6biYf5Rla74oXt5x0Yk
RJfn5+CgkJUb9+/bR27Vrl5+crPPz9eXV9+/WpzZAA6jW3vxU/fPhwrV+/3XUd/s2odPH1YmTu+Y17Ld2n1kSVS/nmGRrcHQUoGoq
mT5+uSZMmKSEhQQsSWLFBERISWLFkiSRo4cKBWrlypypZMhlNW7cWG+99ZYkKTAwUFOmTFG3bt0k
SU8//fRZX/ADADVcxljTF0PcbFFR0crPT8lPAAAOP6J7dXdveHOXhbHMLT0YkHwH1SlmR0VdjwDgIQoufpJ1fxeIOmNmvUhAPvOaPtHSmnIl5YHu
EboAQCwGKEHAMBihB4AAIsRegAALEboAQCwGKEHAMBihB4AAIsRegAALEboAQCwGKEHAMBih
4AAIsRegAALEboAQCwGKEHAMBihB4AAIsRegAALEboAQCwGKEHAMBihB4AAIsRegAALEboAQC
wGKEHAMBihB4AAIsRegAALEboAQCwGKEHAMBinnU9AACcj97vvC5B/fdZQQWdt/t75N7DgAAFiP0
AABYjNADADGxqQg8AgMUkIPQAAFiP0AABYjNADAGxqQg8AgMUkIPQAAFiP0AABYjNADAGxqQg8AgMUkIPQAAFiP0AABYjNADAGxqQg8AgMUkIPQAAFiP0AABYjN
MUIPQAAFiP0AABYjNADAGxqQg8AgMUkIPQAAFiP0AABYjNADAGxqQg8AgMUkIPQAAFiP0AABYjN
ADAGAxQg8AgMUIPQAAFiP0AABYjNADAGAxQg8AgMUIPQAAFiP0AABYjNADAGAxQg8AgMUIPQA
AFiP0AABYjNADAGAxQg8AgMUIPQAAFiP0AABYjNADAGAxQg8AgMUIPQAAFiP0AABYjNADAGAx
Qg8AgMUIPQAAFiP0AABYjNADAGAxQg8AgMUIPQAAFiP0AABYjNADAGAxQg8AgMUIPQAAFiP0A
ABYjNADAGCxehP61atXq23btoqMjNS0adPqehwAAOqFehH6iooKTZgwQatWrdKOHTu0cOFC7dixo67HAgDgslcvQr9582ZFRkYqIiJCDRs2VLx48bR8+fK6HgsAgMtevQh9bm6uwsLCnOuhoaHKzc2tw4kAAKgfPOt6gIspKSlJSUlJkqTs7GxFR0fX8UQ1MzR9XQ9wgEk9+oqMjy0O3cfpOYs7l2BoA3/Xv1c9oHSQpVJA21kKHpS/IX39O7znVbiVbSbr9Tmhn3ZjuMl9
o7D7wtYu7bMJZXM1hvRLtajwNNlWfDPOUzpTrjqpYu
CnJJtzc6oECf/eAdWcFoQMqNnFATCUM4ZbJ0y/EZLtzkMmKj6FPhJQcHFzXY9jNXfcP

d4q8pq4nsB73PfdzW5skZWdnn3N5vQh9aGio9u/f75zOyclRaGholXXGjRuncePG1fZocIPo6
Gilp6fX9RjAHw73PTvVi7fuu3XrpszMTGVlZam0tFSpqamKj4+v67EAALjk1YtX9J6ennr11V
fVr18/VVRU6O6771aHDh3qeiwAAC559SL0kjRw4EANHDiwrsdALeAjGKBucN+zk8sYY+p6CAA
A4B714jN6AADw+xB61Jrs7Gx17NixrscAgD8UQg8AgMUIPWpVRUWFxo4dqw4dOqhv3746fvy4
3nzzTXXr1k2dO3fWHXfcoZKSEknS6NGjdd9996l79+5q1aqV1q9fr7vvvlvt2rXXT6NGj6/ZAg
EvcsWPHdMstt6hz587q2LGj3nvvPbVo0UJPPPGEoqKidO2112r37t2SpOXLLlysmJkZXX321br
75ZuXl5UmSpk2bpsTERN14442KiIjQhx9+6Fy+f//+Kisrq8tDxHki9KhVmZmZeuCBB5SRkSF
/f3998MEHuv322/XPf/5T27ZtU7t27bRgwQJn/fz8uFPXHnllldq6dauioqI0efJkPjOI0efZPMM5Ikl8vlrPPrf/
/Xf/2XHnzwQe3YsUNvvPFGtffBhg0bOpfPlh/EHrUueLiYoWEhKisrEwpKSl1PQ5ghZ9//lm
NGzfWqFGj9Pjjj2vr1q2SpPfee8/5t0ePpKkwsJC5/8fkpycXDcDw23qzV/Gg71mzJihmJgY
BQcHKyYmRsXFxXU9ElDv7dixQ48//rjzSvz111/XkCFDlJ+fr06dOsnLy0Fy+WdOpLd3/5y
18UEBCg3r17Kysrq46nx8XEX8YDgD+IFi1aKD09XUFBQXU9CmoRb90DAGAxXtEAAAAxXtEDAG
AxQg8AgMUIPQAAFiP0AABYjNADAGAxQg8AgMX+P5bV6lZYD6aFAAAAAElFTkSuQmCC\n",
       "text/plain": [
        "<Figure size 576x576 with 1 Axes>"
       ]
      },
      "metadata": {},
      "output_type": "display_data"
     }
    ],
    "source": [
     "plt.figure(figsize = [8, 8], clear = True, facecolor =
\"white\")\n",
     "\n",
     "sns.barplot(x = data[\"target\"].value_counts().index,\n",
     "   y = data[\"target\"].value_counts(), palette =
[\"#C82C02\", \"#410F01\"],\n",
     "   saturation = 1).set(title = \"Class (ham or spam)
frequencies of 'target' variable}\");"
    ]
   },
   {
    "cell_type": "code",
    "execution_count": 12,
    "id": "fa3032b1",
    "metadata": {
     "execution": {
      "iopub.execute_input": "2022-10-25T06:57:23.297362Z",
      "iopub.status.busy": "2022-10-25T06:57:23.296147Z",
      "iopub.status.idle": "2022-10-25T06:57:24.348531Z",
      "shell.execute_reply": "2022-10-25T06:57:24.347280Z"
     },
     "papermill": {
      "duration": 1.06822,
      "end_time": "2022-10-25T06:57:24.351746",
      "exception": false,
      "start_time": "2022-10-25T06:57:23.283526",
      "status": "completed"
     },
     "tags": []
    },

```
   "outputs": [
    {
     "data": {
      "text/html": [
       "        <script type=\"text/javascript\">\n",
       "        window.PlotlyConfig = {MathJaxConfig: 'local'};\n",
       "        if (window.MathJax && window.MathJax.Hub &&
window.MathJax.Hub.Config) {window.MathJax.Hub.Config({SVG: {font:
\"STIX-Web\"}});}\n",
       "        if (typeof require !== 'undefined') {\n",
       "        require.undef(\"plotly\");\n",
       "        requirejs.config({\n",
       "            paths: {\n",
       "                'plotly': ['https://cdn.plot.ly/plotly-
2.12.1.min']\n",
       "            }\n",
       "        });\n",
       "        require(['plotly'], function(Plotly) {\n",
       "            window._Plotly = Plotly;\n",
       "        });\n",
       "        }\n",
       "        </script>\n",
       "        "
      ]
     },
     "metadata": {},
     "output_type": "display_data"
    },
    {
     "data": {
      "text/html": [
       "<div>                            <div id=\"9ac0bb0c-3376-4e43-
90c9-d3f735ee9ab4\" class=\"plotly-graph-div\" style=\"height:500px;
width:1000px;\"></div>            <script type=\"text/javascript\">
require([\"plotly\"], function(Plotly) {
window.PLOTLYENV=window.PLOTLYENV || {};
if (document.getElementById(\"9ac0bb0c-3376-4e43-90c9-d3f735ee9ab4\")) {
Plotly.newPlot(                          \"9ac0bb0c-3376-4e43-90c9-
d3f735ee9ab4\",
[{\"domain\":{\"x\":[0.0,1.0],\"y\":[0.0,1.0]},\"hole\":0.4,\"hovertempla
te\":\"target=%{label}<extra></extra>\",\"labels\":[\"ham\",\"ham\",\"spa
m\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"
spam\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",
\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"spam\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\
",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"ha
m\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"sp
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
```

m\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\
"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"s
pam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"
ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\
"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\"
,\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"spam
\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"spam\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"
spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"h
am\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"spam\",\"ham\",
\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\"
,\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\

",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham
\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ha
m\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",
\"ham\",\"spam\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"h
am\",\"spam\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"spam\",\"spam\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"spam\",\"spam\",\"s
pam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ha
m\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ha
m\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"h
am\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"sp
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham
\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham
\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\
"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\
",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\
",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham

\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"spam\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"spam\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\
",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham
\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\"
,\"spam\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\
",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"h
am\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"
spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"
ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"

ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"spam\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"
ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"
ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\
"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\"
,\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham
\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ha
m\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\
",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham
\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"sp
am\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"

ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"s
pam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\
"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"sp
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"h
am\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"s
pam\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\
"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",
\"ham\"
,\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"spam\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",
\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\
",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ha
m\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"s
pam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"s
pam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"h

am\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"sp
am\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"s
pam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam
\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",
\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\
"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"spam\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\
",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham
\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"spam\",\"spam\",\"spam\",\"spam\",\"spam\",\"spam\",\"spam\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"

,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\
",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\
",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"spa
m\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spa
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ha
m\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\"
,\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"spam\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spa
m\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"sp
am\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"s
pam\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\
"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",

\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\
",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam
\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ha
m\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"h
am\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"s
pam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"s
pam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"sp
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"spam\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"spam\",\"spam\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\
"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"sp
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"ha
m\",\"spam\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"s
pam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h

am\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"s
pam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"
spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ha
m\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"sp
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spa
m\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"h
am\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ha
m\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"h
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"
spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"
spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\"
,\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\
",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham
\",\"spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"sp
am\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham
\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"ha

m\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ha
m\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham
\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"spam\",
\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\
",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\
"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"
ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"
spam\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\"
,\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\
",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"spam\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"ham\",\"ham\",\"ham\"
,\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",\"ham\",
\"ham\",\"ham\",\"ham\",\"ham\",\"spam\",\"spam\",\"ham\",\"ham\",\"ham\"
,\"ham\"],\"legendgroup\":\"\",\"name\":\"\",\"showlegend\":true,\"type\"
:\"pie\",\"marker\":{\"line\":{\"color\":\"#410F01\",\"width\":1.5}},\"te
xtinfo\":\"percent+label\",\"textposition\":\"inside\"}],
{\"template\":{\"data\":{\"histogram2dcontour\":[{\"type\":\"histogram2dc
ontour\",\"colorbar\":{\"outlinewidth\":0,\"ticks\":\"\"},\"colorscale\":
[[0.0,\"#0d0887\"],[0.1111111111111111,\"#46039f\"],[0.2222222222222222,\
"#7201a8\"],[0.3333333333333333,\"#9c179e\"],[0.4444444444444444,\"#bd378
6\"],[0.5555555555555556,\"#d8576b\"],[0.6666666666666666,\"#ed7953\"],[0
.7777777777777778,\"#fb9f3a\"],[0.8888888888888888,\"#fdca26\"],[1.0,\"#f
0f921\"]]}],\"choropleth\":[{\"type\":\"choropleth\",\"colorbar\":{\"outl
inewidth\":0,\"ticks\":\"\"}}],\"histogram2d\":[{\"type\":\"histogram2d\"
,\"colorbar\":{\"outlinewidth\":0,\"ticks\":\"\"},\"colorscale\":[[0.0,\"
#0d0887\"],[0.1111111111111111,\"#46039f\"],[0.2222222222222222,\"#7201a8
\"],[0.3333333333333333,\"#9c179e\"],[0.4444444444444444,\"#bd3786\"],[0.
5555555555555556,\"#d8576b\"],[0.6666666666666666,\"#ed7953\"],[0.7777777
777777778,\"#fb9f3a\"],[0.8888888888888888,\"#fdca26\"],[1.0,\"#f0f921\"]
]}],\"heatmap\":[{\"type\":\"heatmap\",\"colorbar\":{\"outlinewidth\":0,\
"ticks\":\"\"},\"colorscale\":[[0.0,\"#0d0887\"],[0.1111111111111111,\"#4
6039f\"],[0.2222222222222222,\"#7201a8\"],[0.3333333333333333,\"#9c179e\"
],[0.4444444444444444,\"#bd3786\"],[0.5555555555555556,\"#d8576b\"],[0.66
6666666666666,\"#ed7953\"],[0.7777777777777778,\"#fb9f3a\"],[0.888888888
8888888,\"#fdca26\"],[1.0,\"#f0f921\"]]}],\"heatmapgl\":[{\"type\":\"heat

mapgl\",\"colorbar\":{\"outlinewidth\":0,\"ticks\":\"\"},\"colorscale\":[
[0.0,\"#0d0887\"],[0.1111111111111111,\"#46039f\"],[0.2222222222222222,\"
#7201a8\"],[0.3333333333333333,\"#9c179e\"],[0.4444444444444444,\"#bd3786
\"],[0.5555555555555556,\"#d8576b\"],[0.6666666666666666,\"#ed7953\"],[0.
7777777777777778,\"#fb9f3a\"],[0.8888888888888888,\"#fdca26\"],[1.0,\"#f0
f921\"]]}],\"contourcarpet\":[{\"type\":\"contourcarpet\",\"colorbar\":{\
"outlinewidth\":0,\"ticks\":\"\"}}],\"contour\":[{\"type\":\"contour\",\"
colorbar\":{\"outlinewidth\":0,\"ticks\":\"\"},\"colorscale\":[[0.0,\"#0d
0887\"],[0.1111111111111111,\"#46039f\"],[0.2222222222222222,\"#7201a8\"]
,[0.3333333333333333,\"#9c179e\"],[0.4444444444444444,\"#bd3786\"],[0.555
5555555555556,\"#d8576b\"],[0.6666666666666666,\"#ed7953\"],[0.7777777777
777778,\"#fb9f3a\"],[0.8888888888888888,\"#fdca26\"],[1.0,\"#f0f921\"]]}]
,\"surface\":[{\"type\":\"surface\",\"colorbar\":{\"outlinewidth\":0,\"ti
cks\":\"\"},\"colorscale\":[[0.0,\"#0d0887\"],[0.1111111111111111,\"#4603
9f\"],[0.2222222222222222,\"#7201a8\"],[0.3333333333333333,\"#9c179e\"],[
0.4444444444444444,\"#bd3786\"],[0.5555555555555556,\"#d8576b\"],[0.66666
6666666666666,\"#ed7953\"],[0.7777777777777778,\"#fb9f3a\"],[0.888888888888
8888,\"#fdca26\"],[1.0,\"#f0f921\"]]}],\"mesh3d\":[{\"type\":\"mesh3d\",\
"colorbar\":{\"outlinewidth\":0,\"ticks\":\"\"}}],\"scatter\":[{\"fillpat
tern\":{\"fillmode\":\"overlay\",\"size\":10,\"solidity\":0.2},\"type\":\
"scatter\"}],\"parcoords\":[{\"type\":\"parcoords\",\"line\":{\"colorbar\
":{\"outlinewidth\":0,\"ticks\":\"\"}}}],\"scatterpolargl\":[{\"type\":\"
scatterpolargl\",\"marker\":{\"colorbar\":{\"outlinewidth\":0,\"ticks\":\
"\"}}}],\"bar\":[{\"error_x\":{\"color\":\"#2a3f5f\"},\"error_y\":{\"colo
r\":\"#2a3f5f\"},\"marker\":{\"line\":{\"color\":\"#E5ECF6\",\"width\":0.
5},\"pattern\":{\"fillmode\":\"overlay\",\"size\":10,\"solidity\":0.2}},\
"type\":\"bar\"}],\"scattergeo\":[{\"type\":\"scattergeo\",\"marker\":{\"
colorbar\":{\"outlinewidth\":0,\"ticks\":\"\"}}}],\"scatterpolar\":[{\"ty
pe\":\"scatterpolar\",\"marker\":{\"colorbar\":{\"outlinewidth\":0,\"tick
s\":\"\"}}}],\"histogram\":[{\"marker\":{\"pattern\":{\"fillmode\":\"over
lay\",\"size\":10,\"solidity\":0.2}},\"type\":\"histogram\"}],\"scattergl
\":[{\"type\":\"scattergl\",\"marker\":{\"colorbar\":{\"outlinewidth\":0,
\"ticks\":\"\"}}}],\"scatter3d\":[{\"type\":\"scatter3d\",\"line\":{\"col
orbar\":{\"outlinewidth\":0,\"ticks\":\"\"}},\"marker\":{\"colorbar\":{\"
outlinewidth\":0,\"ticks\":\"\"}}}],\"scattermapbox\":[{\"type\":\"scatte
rmapbox\",\"marker\":{\"colorbar\":{\"outlinewidth\":0,\"ticks\":\"\"}}}]
,\"scatterternary\":[{\"type\":\"scatterternary\",\"marker\":{\"colorbar\
":{\"outlinewidth\":0,\"ticks\":\"\"}}}],\"scattercarpet\":[{\"type\":\"s
cattercarpet\",\"marker\":{\"colorbar\":{\"outlinewidth\":0,\"ticks\":\"\
"}}}],\"carpet\":[{\"aaxis\":{\"endlinecolor\":\"#2a3f5f\",\"gridcolor\":
\"white\",\"linecolor\":\"white\",\"minorgridcolor\":\"white\",\"startlin
ecolor\":\"#2a3f5f\"},\"baxis\":{\"endlinecolor\":\"#2a3f5f\",\"gridcolor
\":\"white\",\"linecolor\":\"white\",\"minorgridcolor\":\"white\",\"start
linecolor\":\"#2a3f5f\"},\"type\":\"carpet\"}],\"table\":[{\"cells\":{\"f
ill\":{\"color\":\"#EBF0F8\"},\"line\":{\"color\":\"white\"}},\"header\":
{\"fill\":{\"color\":\"#C8D4E3\"},\"line\":{\"color\":\"white\"}},\"type\
":\"table\"}],\"barpolar\":[{\"marker\":{\"line\":{\"color\":\"#E5ECF6\",
\"width\":0.5},\"pattern\":{\"fillmode\":\"overlay\",\"size\":10,\"solidi
ty\":0.2}},\"type\":\"barpolar\"}],\"pie\":[{\"automargin\":true,\"type\"
:\"pie\"}]},\"layout\":{\"autotypenumbers\":\"strict\",\"colorway\":[\"#6
36efa\",\"#EF553B\",\"#00cc96\",\"#ab63fa\",\"#FFA15A\",\"#19d3f3\",\"#FF
6692\",\"#B6E880\",\"#FF97FF\",\"#FECB52\"],\"font\":{\"color\":\"#2a3f5f
\"},\"hovermode\":\"closest\",\"hoverlabel\":{\"align\":\"left\"},\"paper
_bgcolor\":\"white\",\"plot_bgcolor\":\"#E5ECF6\",\"polar\":{\"bgcolor\":
\"#E5ECF6\",\"angularaxis\":{\"gridcolor\":\"white\",\"linecolor\":\"whit
e\",\"ticks\":\"\"},\"radialaxis\":{\"gridcolor\":\"white\",\"linecolor\"
:\"white\",\"ticks\":\"\"}},\"ternary\":{\"bgcolor\":\"#E5ECF6\",\"aaxis\
":{\"gridcolor\":\"white\",\"linecolor\":\"white\",\"ticks\":\"\"},\"baxi

```
s\":{\"gridcolor\":\"white\",\"linecolor\":\"white\",\"ticks\":\"\"},\"ca
xis\":{\"gridcolor\":\"white\",\"linecolor\":\"white\",\"ticks\":\"\"}},\
"coloraxis\":{\"colorbar\":{\"outlinewidth\":0,\"ticks\":\"\"}},\"colorsc
ale\":{\"sequential\":[[0.0,\"#0d0887\"],[0.1111111111111111,\"#46039f\"]
,[0.2222222222222222,\"#7201a8\"],[0.3333333333333333,\"#9c179e\"],[0.444
4444444444444,\"#bd3786\"],[0.5555555555555556,\"#d8576b\"],[0.6666666666
666666,\"#ed7953\"],[0.7777777777777778,\"#fb9f3a\"],[0.8888888888888888,
\"#fdca26\"],[1.0,\"#f0f921\"]],\"sequentialminus\":[[0.0,\"#0d0887\"],[0
.1111111111111111,\"#46039f\"],[0.2222222222222222,\"#7201a8\"],[0.333333
3333333333,\"#9c179e\"],[0.4444444444444444,\"#bd3786\"],[0.5555555555555
556,\"#d8576b\"],[0.6666666666666666,\"#ed7953\"],[0.7777777777777778,\"#
fb9f3a\"],[0.8888888888888888,\"#fdca26\"],[1.0,\"#f0f921\"]],\"diverging
\":[[0,\"#8e0152\"],[0.1,\"#c51b7d\"],[0.2,\"#de77ae\"],[0.3,\"#f1b6da\"]
,[0.4,\"#fde0ef\"],[0.5,\"#f7f7f7\"],[0.6,\"#e6f5d0\"],[0.7,\"#b8e186\"],
[0.8,\"#7fbc41\"],[0.9,\"#4d9221\"],[1,\"#276419\"]]},\"xaxis\":{\"gridco
lor\":\"white\",\"linecolor\":\"white\",\"ticks\":\"\",\"title\":{\"stand
off\":15},\"zerolinecolor\":\"white\",\"automargin\":true,\"zerolinewidth
\":2},\"yaxis\":{\"gridcolor\":\"white\",\"linecolor\":\"white\",\"ticks\
":\"\",\"title\":{\"standoff\":15},\"zerolinecolor\":\"white\",\"automarg
in\":true,\"zerolinewidth\":2},\"scene\":{\"xaxis\":{\"backgroundcolor\":
\"#E5ECF6\",\"gridcolor\":\"white\",\"linecolor\":\"white\",\"showbackgro
und\":true,\"ticks\":\"\",\"zerolinecolor\":\"white\",\"gridwidth\":2},\"
yaxis\":{\"backgroundcolor\":\"#E5ECF6\",\"gridcolor\":\"white\",\"lineco
lor\":\"white\",\"showbackground\":true,\"ticks\":\"\",\"zerolinecolor\":
\"white\",\"gridwidth\":2},\"zaxis\":{\"backgroundcolor\":\"#E5ECF6\",\"g
ridcolor\":\"white\",\"linecolor\":\"white\",\"showbackground\":true,\"ti
cks\":\"\",\"zerolinecolor\":\"white\",\"gridwidth\":2}},\"shapedefaults\
":{\"line\":{\"color\":\"#2a3f5f\"}},\"annotationdefaults\":{\"arrowcolor
\":\"#2a3f5f\",\"arrowhead\":0,\"arrowwidth\":1},\"geo\":{\"bgcolor\":\"w
hite\",\"landcolor\":\"#E5ECF6\",\"subunitcolor\":\"white\",\"showland\":
true,\"showlakes\":true,\"lakecolor\":\"white\"},\"title\":{\"x\":0.05},\
"mapbox\":{\"style\":\"light\"}}},\"legend\":{\"tracegroupgap\":0},\"titl
e\":{\"text\":\"counts in 'target'
variable\",\"font\":{\"size\":30},\"x\":0.5},\"piecolorway\":[\"rgb(92,
83, 165)\",\"rgb(160, 89, 160)\",\"rgb(206, 102, 147)\",\"rgb(235, 127,
134)\",\"rgb(248, 160, 126)\",\"rgb(250, 196, 132)\",\"rgb(243, 231,
155)\"],\"height\":500,\"width\":1000,\"uniformtext\":{\"minsize\":25}},
{\"responsive\": true}                    ).then(function(){\n",
       "                            \n",
       "var gd = document.getElementById('9ac0bb0c-3376-4e43-90c9-
d3f735ee9ab4');\n",
       "var x = new MutationObserver(function (mutations, observer)
{{\n",
       "        var display = window.getComputedStyle(gd).display;\n",
       "        if (!display || display === 'none') {{\n",
       "            console.log([gd, 'removed!']);\n",
       "            Plotly.purge(gd);\n",
       "            observer.disconnect();\n",
       "        }}\n",
       "}});\n",
       "\n",
       "// Listen for the removal of the full notebook cells\n",
       "var notebookContainer = gd.closest('#notebook-container');\n",
       "if (notebookContainer) {{\n",
       "    x.observe(notebookContainer, {childList: true});\n",
       "}}\n",
       "\n",
       "// Listen for the clearing of the current output cell\n",
```

```
       "var outputEl = gd.closest('.output');\n",
       "if (outputEl) {{\n",
       "    x.observe(outputEl, {childList: true});\n",
       "}}\n",
       "\n",
       "                          })                };                });
</script>        </div>"
      ]
     },
     "metadata": {},
     "output_type": "display_data"
    }
   ],
   "source": [
    "fig = px.pie(data_frame = data, names = \"target\", hole = 0.4,
title = \"counts in 'target' variable\", \n",
    "             width = 1000, height = 500, color_discrete_sequence =
px.colors.sequential.Sunset_r)\n",
    "\n",
    "fig.update_traces(textposition = \"inside\", textinfo =
\"percent+label\",\n",
    "                  marker = dict(line = dict(width = 1.5, color =
\"#410F01\")))\n",
    "\n",
    "fig.update_layout(title_x = 0.5, title_font = dict(size = 30),
uniformtext_minsize = 25)\n",
    "\n",
    "fig.show()"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 13,
   "id": "23a2778d",
   "metadata": {
    "execution": {
     "iopub.execute_input": "2022-10-25T06:57:24.378990Z",
     "iopub.status.busy": "2022-10-25T06:57:24.377962Z",
     "iopub.status.idle": "2022-10-25T06:57:26.479299Z",
     "shell.execute_reply": "2022-10-25T06:57:26.478213Z"
    },
    "papermill": {
     "duration": 2.117594,
     "end_time": "2022-10-25T06:57:26.481852",
     "exception": false,
     "start_time": "2022-10-25T06:57:24.364258",
     "status": "completed"
    },
    "tags": []
   },
   "outputs": [
    {
     "data": {
      "text/html": [
       "<style type=\"text/css\">\n",
       "#T_88c97_row0_col0, #T_88c97_row1_col0, #T_88c97_row1_col3,
#T_88c97_row2_col0, #T_88c97_row2_col1, #T_88c97_row2_col2,
```

```
#T_88c97_row2_col3, #T_88c97_row2_col4, #T_88c97_row2_col5,
#T_88c97_row2_col6, #T_88c97_row2_col7 {\n",
       "  background-color: #3f007d;\n",
       "  color: #f1f1f1;\n",
       "}\n",
       "#T_88c97_row0_col1, #T_88c97_row0_col2, #T_88c97_row0_col3,
#T_88c97_row0_col4, #T_88c97_row0_col5, #T_88c97_row0_col6,
#T_88c97_row0_col7 {\n",
       "  background-color: #fcfbfd;\n",
       "  color: #000000;\n",
       "}\n",
       "#T_88c97_row1_col1 {\n",
       "  background-color: #63449d;\n",
       "  color: #f1f1f1;\n",
       "}\n",
       "#T_88c97_row1_col2, #T_88c97_row1_col6 {\n",
       "  background-color: #63439c;\n",
       "  color: #f1f1f1;\n",
       "}\n",
       "#T_88c97_row1_col4 {\n",
       "  background-color: #66499f;\n",
       "  color: #f1f1f1;\n",
       "}\n",
       "#T_88c97_row1_col5 {\n",
       "  background-color: #674ca1;\n",
       "  color: #f1f1f1;\n",
       "}\n",
       "#T_88c97_row1_col7 {\n",
       "  background-color: #64459e;\n",
       "  color: #f1f1f1;\n",
       "}\n",
       "</style>\n",
       "<table id=\"T_88c97_\">\n",
       "  <thead>\n",
       "    <tr>\n",
       "      <th class=\"blank level0\" > </th>\n",
       "      <th class=\"col_heading level0 col0\" >count</th>\n",
       "      <th class=\"col_heading level0 col1\" >mean</th>\n",
       "      <th class=\"col_heading level0 col2\" >std</th>\n",
       "      <th class=\"col_heading level0 col3\" >min</th>\n",
       "      <th class=\"col_heading level0 col4\" >25%</th>\n",
       "      <th class=\"col_heading level0 col5\" >50%</th>\n",
       "      <th class=\"col_heading level0 col6\" >75%</th>\n",
       "      <th class=\"col_heading level0 col7\" >max</th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th id=\"T_88c97_level0_row0\" class=\"row_heading level0
row0\" >ch_no</th>\n",
       "      <td id=\"T_88c97_row0_col0\" class=\"data row0 col0\"
>5169.000000</td>\n",
       "      <td id=\"T_88c97_row0_col1\" class=\"data row0 col1\"
>78.977945</td>\n",
       "      <td id=\"T_88c97_row0_col2\" class=\"data row0 col2\"
>58.236293</td>\n",
       "      <td id=\"T_88c97_row0_col3\" class=\"data row0 col3\"
>2.000000</td>\n",
```

```
       "      <td id=\"T_88c97_row0_col4\" class=\"data row0 col4\"
>36.000000</td>\n",
       "      <td id=\"T_88c97_row0_col5\" class=\"data row0 col5\"
>60.000000</td>\n",
       "      <td id=\"T_88c97_row0_col6\" class=\"data row0 col6\"
>117.000000</td>\n",
       "      <td id=\"T_88c97_row0_col7\" class=\"data row0 col7\"
>910.000000</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th id=\"T_88c97_level0_row1\" class=\"row_heading level0
row1\" >wd_no</th>\n",
       "      <td id=\"T_88c97_row1_col0\" class=\"data row1 col0\"
>5169.000000</td>\n",
       "      <td id=\"T_88c97_row1_col1\" class=\"data row1 col1\"
>18.453279</td>\n",
       "      <td id=\"T_88c97_row1_col2\" class=\"data row1 col2\"
>13.324793</td>\n",
       "      <td id=\"T_88c97_row1_col3\" class=\"data row1 col3\"
>1.000000</td>\n",
       "      <td id=\"T_88c97_row1_col4\" class=\"data row1 col4\"
>9.000000</td>\n",
       "      <td id=\"T_88c97_row1_col5\" class=\"data row1 col5\"
>15.000000</td>\n",
       "      <td id=\"T_88c97_row1_col6\" class=\"data row1 col6\"
>26.000000</td>\n",
       "      <td id=\"T_88c97_row1_col7\" class=\"data row1 col7\"
>220.000000</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th id=\"T_88c97_level0_row2\" class=\"row_heading level0
row2\" >sn_no</th>\n",
       "      <td id=\"T_88c97_row2_col0\" class=\"data row2 col0\"
>5169.000000</td>\n",
       "      <td id=\"T_88c97_row2_col1\" class=\"data row2 col1\"
>1.947185</td>\n",
       "      <td id=\"T_88c97_row2_col2\" class=\"data row2 col2\"
>1.362406</td>\n",
       "      <td id=\"T_88c97_row2_col3\" class=\"data row2 col3\"
>1.000000</td>\n",
       "      <td id=\"T_88c97_row2_col4\" class=\"data row2 col4\"
>1.000000</td>\n",
       "      <td id=\"T_88c97_row2_col5\" class=\"data row2 col5\"
>1.000000</td>\n",
       "      <td id=\"T_88c97_row2_col6\" class=\"data row2 col6\"
>2.000000</td>\n",
       "      <td id=\"T_88c97_row2_col7\" class=\"data row2 col7\"
>28.000000</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n"
      ],
      "text/plain": [
       "<pandas.io.formats.style.Styler at 0x7f74c6eb7810>"
      ]
     },
     "execution_count": 13,
     "metadata": {},
```

"output_type": "execute_result"
}
],
"source": [
"data[\"ch_no\"] = data[\"text\"].apply(len)\n",
"data[\"wd_no\"] = data.apply(lambda row:
nltk.word_tokenize(row[\"text\"]), axis=1).apply(len)\n",
"data[\"sn_no\"] = data.apply(lambda row:
nltk.sent_tokenize(row[\"text\"]), axis=1).apply(len)\n",
"\n",
"data.describe().T.style.background_gradient(cmap = \"Purples_r\")"
]
},
{
"cell_type": "code",
"execution_count": 14,
"id": "905ab6ed",
"metadata": {
"execution": {
"iopub.execute_input": "2022-10-25T06:57:26.507887Z",
"iopub.status.busy": "2022-10-25T06:57:26.507513Z",
"iopub.status.idle": "2022-10-25T06:57:30.761418Z",
"shell.execute_reply": "2022-10-25T06:57:30.760495Z"
},
"papermill": {
"duration": 4.270736,
"end_time": "2022-10-25T06:57:30.764717",
"exception": false,
"start_time": "2022-10-25T06:57:26.493981",
"status": "completed"
},
"tags": []
},
"outputs": [
{
"data": {
"image/png":
"iVBORw0KGgoAAAANSUhEUgAAA9AAAAKfCAYAAACG1yDlAAAAOXRFWHRTb2Z0d2FyZQBNYXRw
bG90bGliIHZlcnNpb24zLjUuMiwgaHR0cHM6Ly9tYXRwbG90bGliLm9yZy8qNh9FAAAACXBIW
XMAAAsTAAALEwEAmpwYAAEAAElEQVR4nOzddXxU17bA8d8Zn4zE3YO7150qqFerueeuvu7u7u7n
Lb3ld3o0YpUCwEAiHuybif98eESUICJDQGrO/n08/N2bPPOevMexlmZe+9tqKqKkIIIYQQQgg
hhNgwzWAHIIQQQgghhBBCbA4kgRZCCCCGEEEIIIXpAEmghhBBCCCGEEKIHJIEWQgghhBBCCCF6
QBJoIYQQQghhBCiBySBFkIIIYQQQgghekA32AH8W/vuu6/6+eefD3YYQojNn7KxDvDJ5I4Io
/J5I4QYKBv9vBG9s9mPQDc0NAx2CEKIrYR83ghBop83ghhxNC02SfQQghhBBCCCHEQJAEWg
ghhBBCCCGE6AFJoIUQQghhBBCiB6QBFoIIYQQQghhOiBzb4KtxBCCCGGnpDbjXvxfLwrl6N
PTcc6YQrG9MzBDmurpaoq7iULcS/5B43JhHX8ZMyFwwc7LCGE2OxIAi2EEEKIPqWvUfU3p
dRfH2hJ23YsR9z2JITl1ECPbejnn/saiEw5CDQQAMKRnMu7Vj4gbPmqQIxNCiM2LTOEkghR
J/ylZdRduf1ndpafvgKz7LFgxTR1i3s91H+5P2x5BkgUFtNy5wfBjEqIYTYPEkCvQmcR
J/ylZdRduf1ndpafvgKz7LFgxTR1i3s91H+5P2x5BkgUFtNy5wfBjEqIYTYPEkCvQmcC+cNdg
hCCCHEkBXxeQm7XV3aw27nIEQjIn4//oo1ZCZCjhYUH7467eMlghyK
EEEIMSabsHBJ2ntmpTWMyYy4sGb2S6l/zVVQBUvfTk
IEcihBBCDE1ai43CG+8m9dBj0R8n6zybvsBnQJiRiz8xj58wY7
LCEEGKzo6iqOtgx/CvTpk3T586dO9hhCCE2f8rGOsDW8nmjqirOBfOpfesVPMVFpBx0FMn7
7o0xIsHOrSpvZrHoy4+WpMXn1HfubhrqbgxWx5aHHnnh9w5n9kYNmnpvEOhpdLKxvNzZb
wp3BXZS/Cz2Y2HuEoEtUqUBG6bIWbfH2pHsZsyXX8Wh9jHzeVGKGK+rsxE3jCEpXcmnlC/ctFMfLP
mYbAo/59ZLovmnvTFBHwOqERoDpEBZUB
0uMLnn2mMJnIjVHrwpDGAYFkp4Cz6GA4E9/p3XO7VeG4bSNK8o0DJ2UN
Cbu0ggQLChDq3Njs5mH+xwhpJB+7zx11SjMejRJ6X0+bWFEEPSRj9vRO/ICHQn0hF71S
GtPyQF+Wif4CIQAfSUvmD9nB9Kv2k
0Apesh...

QgghhBBCiK2EJNC9EHG70ZjMsWN9YhLB+rpBjEgIIYQQQgghxECRBLoXwl43GqMxdqyNT5QRa
CGEEEIIIYTYSkgC3QthtxuNwRQ71tnjJYEWQgghhBBCiK2EJNC9EPF0HoHW2eNlCrcQQgghhB
BCbCUkge6FkNuJxtQ+Aq21WAm1NA1iREIIIYQQQgghBkq/J9CKolysKMpiRVEWKYrypqIoJkV
RChVF+V1RlBWKorytKIqhra+x7XhF2+sF/R1fb4RdLjTGDgm01UawWRJoIYQQQgghhNga9GsC
rShKNnABMF1V1fGAFjgauBt4UFXV4UAzcFrbKacBzW3tD7b1GzIiblenKtxai5VQa/MgRiSEE
EIIIYQQYqAMxBRuHWBWFEUHxAHVwB7Ae22vvwwc3Pbz7LZj2l6fqSiKMgAx9kjY4+5mCrck0E
IIIcRACvt9uJctxvnP3wQdrYMdjtjCBZsacC6Yi6dkGZFgcLDDEUIMsn5NoFVVrQTuA9YQTZx
bgb+AFlVVQ23dKoDstp+zgfK2c0Nt/ZP7M8beCLu7TuEOyT/cQgghxIAJ1Ney+s7rmb//jiyc
vRvLzjoW76qVgx2W2EK5ly3mn2P2Z+EhM5l/wE5UPfcoIadjsMMSQgyi/p7CnUh0VLkQyAIsw
L59cN0zFUWZqyjK3Pr6+n97uR7rdgS6tWXA7i+EGHiD9XkjhOieY+6v1LzyDKhq9Pj3n6l95x
XUtuPNmXzeDC1hr4ey+2/BW7IMADUYpOzem3Etmj+4gQkhBlV/T+HeE1ilqmq9qqpB4ANgRyC
hbUo3QA5Q2fZzJZAL0PZ6PNC47kVVVX1GVdXpqqpOT01N7edHaBfxuLusgQ47WreIf7SFEN0b
rM8bIUT3nH/90aWt6cv/2yJGBeXzZmgJNTfR8tO3Xdp95WWDEI0QYqjo7wR6DbCdoihxbWuZZ
wJLgO+Aw9v6nAR81Pbzx23HtL3+rTqEstOwx91pCrfGYACdjojHPYhRCSGEEFsPy9gJXdrs2+
6ELs4yCNGILZnWHo91wtQu7cb0zEGIRggxVPT3GujfiRYDmwf803a/Z4ArgUsURVlBdI3z822
nPA8kt7VfAlzVn/H1Vtjj6TQCDaCz2aWQmBBCCDFA7NvuRMIuM2PHxpx8Mk86E0Wn28BZQvSe
zmqj8Nrb0SUkxtrSjjoR6/jJgxeUEGLQ9fu/Nqqq3gjcuE5zKbBNN319wBH9HdOming7r4GGt
YXEWjBm5w5SVEIIIcTWw5Sdy8gHn8O7ophIwI952AiMGdkbP1GITWCbPJ2JH36Pb/VKdDY75u
Gj0Nnsgx2WEGIQyZ9re0iNRIj4/WiMxk7tWquVoIxACyGEEANGn5iEfsb2gx2G2EqY8wow5xU
MdhhCiCFiIPaB3iJEfF4UvQFFo+3UrrXYCEslbiGEEEIIIYTY4kkC3UNhtxut2dylXRtnIdgq
I9BCCCGEEEIIsaWTBLqHwh5XlwJiAJo4ixQRE0IIIYQQQoitgCTQPbTuHtBraS2SQAshhBBCC
CHE1kAS6B4Ku9eXQNsINjcNQkRCCCGEEEIIIQaSJNA9FO5mCysAndVKSNZACyGEEEIIIcQWTx
LoHoq43WiMXRNojcVKqEVGoIUQQgghhBBiSycJdA+FPd0n0FqLlVBr6yBEJIQQQgghhBBiIEk
C3UNhtwuN0dilXWuxEna0DHxAQgghhBBCCCEGlCTQPbTBEWinYxAiEkIIIYQQQggxkCSB7qH1
j0BbCLtdqJHIIEQlhBBCCCGEEGKgSALdQ+sbgVY0WjTmOMJOWQcthBBCCCGEEFsySaB7KOL1o
hgM3b6ms9oItbYMbEBCCCGEEEIIIQaUJNA9FPH7UPTdJ9DRStwtAxuQEEIIIYQQQogBJQl0D0
W8XjTrGYHWWq2EWpoHOCIhhBBCCCGEEANJEugeivjWn0Br4qyEZCsrIYQQQgghhNiiSQLdQxu
ewm2RKdxCCCGEEEIIsYWTBLqHIn7feouIac2SQAshhBBCCCHElk4S6B6KTuHuug80REegg62y
BloIIYQQQgghtmSSQPdQxO9H0eu7fU1rsRJqlgRaCCGEEEIIIbZkkkD3UMTn28AItJWQjEALI
YQQQgghxBZNEuge2tAaaI0k0EIIIYQQQgixxZMEuofUgB/NeqtwWwm1tg5wREIIIYQQQgghBp
Ik0D0U8fvXX4XbYiUs+0ALIYQQQgghxBZNN9gBbA5UVSXi9214BNrpGOCohBBCiP4XbGrEX1O
JzmbHlFsw2OEIMST5qyoINjdhSM/AkJI22OEIIfqRjED3gBoMgkaLotV2+7rWYiHsdqGGwwMc
mRBCCNF/XEv+4Z/jDmDBATsz/4BdqP/oHSKBwGCHJcSQoUYiNH3zGfMP2oUFB+7MwsP3wvH3H
4MdlhCiH0kC3QMRnxeNsfsK3ACKRos2zkLIIeughRBCbBmCrS2svOYCvMVLAAg7W1l+yZm4ix
cPcmRCDB2elctZdu6JhJoaAfCvWU3xeScTqKsZ5MiEEP1FEugeiPjXv4XVWlp7PKHmpgGKSAg
hhOhfwfpaXAvndW5UVXxlqwYnICGGIH/FGtR1ZmUEqivx11QNUkRCiP4mCXQPbGgLq7V0VjvB
FkmghRBCbBl09ngMGVld2re29Z0hRwthn3ewwxBDlD4ltUub1mpDF584CNGILYEaDhNsaUYNh
QY7FLEekkD3QMTXgxFom11GoIUQQmwxDGkZDLvzkU5/QM488UzixowfxKgGjr+2msrnH2fBIX
uw7Mxjaf1zDqqqDnZYYoiJGz6K3Euua2/QaBh2+0OY8wsHLyix2fKsKKb0litZMHs3Vt5wKe7
lSwc7JNGNfq/CrShKAvAcMB5QgVOBYuBtoABYDRypqmqzoigK8DAwC/AAJ6uqOq/rVQdWxOdF
s5ERaK3VSrC5cYAiEkIIIfpf4s4zmfzxj3jLStEnJRM3ciw6m32ww+p3qqpS+86rlD94OwC+V
Stp/eNnJr7/NdZxkwY5OjGUaM1xZJ1yDok770GgrgZTTj7m4aMGOyyxGQo0N7L8kjNwL1oAQO
1bL9H6+89MeOtTDKnpgxyd6GggtrF6GPhcVdXDFUUxAHHANcA3qqrepSjKVcBVwJXAfsCItv+
2BZ5s+99BtaE9oNfSWmyEZAq3EEKILYii0RA3cgxxI8cMdigDKlBbTdXzj3dqUwMB3EsXSQIt
utBZLNgmTRvsMMRmzrdqZSx5bm9bgXfVCkmgh5h+ncKtKEo8sAvwPICqqgFVVVuA2cDLbd1eB
g5u+3k28Ioa9RuQoChKZn/G2BM9GoG2WAjKFG4hhBBis6fR69FZbV3bTeZBiEYIsTVY33LRjS
0jFQOvv9dAFwL1wIuKovytKMpziqJYgHRVVavb+tQAa/+skg2Udzi/oq1tUEV8PhT9RtZAW+0
EGxsGKCIhhBCib4T9PtzLFuOcP5dgk/w7BqBPTiX/qls6tRkys7GOl9Fnsfnz11bjmPcHnhXF
UqhqCDEXDSftyBM7tSXPOgRz0YhBikisT39P4dYBU4HzVVX9XVGUh4lO145RVVVFKVXVTkUR
TkTOBMgLy+vr2Jdr4h/4yPQOpsdf/nqfo9FCDGwBvrzRoiBFGxuouKZh6h69lGIRDCPGseoh5
/HspVN2e5O4h77MO61j2n97ScM6ZnEb7cz5oJh/XpP+bwR/c254C+WnXMCgepKFIOBgqtuJe3
IE9DFWQY7tK2eNs5C/iXXkrjrTFz//I1l7CTs07ZDZ48f7NDEOvo7ga4AKlRV/b3t+D2iCXSt
oiiZqqpWt03Rrmt7vRLI7XB+TltbJ6qqPgM8AzB9+vR+L4kZ8ftR9PoN9tHabDKFW4gt0EB/3
ggxkFwL5lL19MOxY2/xYiqefIARdz+21U8b1MVZSNhhVxJ22HXA7imfN6I/BVubWXnNBQSqo1
+t1UCAVbdciXXiVOxTtxnk6AREdz9I2e9gUvY7eLBDERvQr1O4VVWtAcoVRVlbjnAmsAT4GDi
pre0k4KO2nz8GTlSitgNaO0z1HjQRnxdFv7Eq3FJETAghxObFs7KkS1vLD18RamkehGiEEP0p
2FCPe+miLu3+yvJuegsh1mcgqnCfD7zeVoG7FDiFaOL+jqIopwFlwJFtfT8luoXVCqLbWJ0yA
PFtVMTnQ7OREWid1U6oVb5wCCGE2HyYutmr1j59B7QyZVCILY4+IQlTQRG+1aWd2g3pg16vV4

```
jNSr8n0Kqqzgemd/PSzG76qsC5/R1Tb0X8vh5N4Q61tqCqKtHtrIUQQoihzTZpGqmHHEP9f98
EotMHcy+6Cq1UmxZii6NPTmH4XY+z9IyjCDsdoCjknHsZljHjBzs0ITYrAzECvdmLVuHe8BRu
jcGIotUSdru63fpCCCGEGGoMqekU3XQPmSecTtjjxlwwDGNWzmCHJYToJ/Hb7MCkj3/EX74aX
UIi5mEj0ZrjBjssITYrkkD3QNjn2WgVbgCtLZ5QS5Mk0EIIITYbOpsd2+TuJooJIbZE5vxCzN
0s3xBC9Ex/7wO9RVB7MAIN0S8hIanELYQQQgghhBBbJEmgeyDs3fg+0ABaezzB5sYBiEgIIYQ
QQgghxECTBLoHerKNFYAuPoFgQ/0ARCSEEEIIIYQQYqBJAt0DEb+vZyPQVjuB+toBiEgIIYQQ
QgghxECTBLoHejoCrY9PkARaCCGEEEIIIbZQkkD3QMTnRWMwbrSfNj6BQG3NAEQkhBBCCCGEE
GKgSQLdAxG/H0Wv32g/fUIiwQYZgRZCCCGEEEKILZEk0D0Q8fl6NAKti08kWF83ABEJIYQQQg
ghhBhokkD3QCTgQ+lBETFdfALBpoYBiEgIIYQQQgghxECTBLoHIj4/mh4UEdPabIScTiLB4AB
EJYQQQgghhBBiIOl62lFRFD1wNrBLW9MPwFOqqm7x2aIa8KMYNr4GWtFo0cXHE2ysx5iRNQCR
CSGEEEIIIYQYKL0ZgX4SmAY80fbf1La2LV7E70Oj3/gaaAB9QhLBBlkHLYQQQgghhBBbmh6PQ
AMzVFWd1OH4W0VRFvR1QENRpIcj0AC6hEQCUkhMCCGEEEIIIbY4vRmBDiuKMmztgaIoRUC470
MaWlRVRQ0GUXqwBhpAZ0+QEWghhBBCCCGE2AL1ZgT6cuA7RVFKAQXIB07pl6iGkIjfh6LToyh
Kj/pr7fEE62UvaCGE2Fp5Vi6n6dvPcS9ZSPKes7BvtzOG5NTBDkuIzYpr0QIaP/+IQH0tKfsf
im3adugslsEOSwghep5Aq6r6jaIoI4BRbU3Fqqr6+yesoUP1+9AYe7b+GUCfkIivurIfIxJCC
DFU+SrLWXLq4fjLywBo+Ohdci64irzzr0DRagc5OiE2D66l/7DomFmE3S4A6t59jVGPv0LKfr
MHOTIhhOj9NlbTgPHAZOAoRVFO7POIhpiwr2d7QK+lT04lUFnejxEJIYQYqjzLFsWS57Uqn3o
QX8WaQYpIiM2Pc+5vseR5rfJH7iLoaB2kiIQQol1vtrF6FRgGzKd97bMKvNL3YQ0dqt/Xoz2g
19KnpOKvqujHiIQQQgxVaiTStTESBrWbdiFEtyKBQDdtfhRVHYRohBCis96sgZ4OjFXVrevTK
+Lr5RTu5FT8NTKFWwghNleBhjrcSxcRamnCXDQCy6hxKDodYY8bjcmMoln/5K24kWPQJ6cQbG
yItWUcdxrG7LyBCF2IIcFTshRPyTI0JjOWsRMwZmT36nz7jO1RDAbUDol0ztmXootP6ONIhRC
i93qTQC8CMoDqfoplSIr4fT2uwA2gtdmJ+P2E3S60Fms/RiaEEKKvBeprWXHNhTR/81m0Qatl
9OOv4C5ZSuP/fYB9u53JPOYU4kaO6fZ8c34RY1/5kLp3XsW54C/SDjmGpD1nodH3bCtEITZ3j
nm/s/iEg4l4PQDEjZ3AmCdfw5Rb0ONrWMZOZMwzb1Hz5ouEmhpIPfQY4nfYtZ8iFkKI3ulNAp
0CLFEU5Q8gVjxMVdWD+jyqISTi96Mx9HwEWlEUDKlp+KsriRs+auMnCCGEGDLcS/5pT54BwmF
Kb7mSxJ1n4ilegqd4Cc3ffcGEtz7HmJHZ7TWsYyZgueFu1GAQTYcaGv6aKvyV5ejiEzAXDEPR
9eafYCGGvrDXQ/nDd8eSZwDPkn9w/PV7rxJo9+L5LD39SOJGj0dns7PqpisovPEeMo4+qVO/Y
GM93jWr0ZrjMBUOQ2s09dWjCCHEevXmX++b+iuIoSzi86L0cuRAn5yKv6pcEmghhNjMhFqaur
QFqivRp7RvQ+Vfsxpv6fL1JtCB5kZUrxd9anqszTl/LsvOPp5AbTWKwUDB1beRdsTx6OJkWx6
x5Yh4PHhWLOvS7q/sXW0Yx9zfUEMh3Ivmx9oqn36I5H0PQp+QCIB7+VKKLzgF7/KloNGQfeaF
ZJ9xPvrE5H/1DIMpEgwSrKtBY45Dn7T5PocQW7oeV+FWVfWH7v5b+7qiKL/2T4iDK+L396oKN
6xNoKWQmBBCbG5MhcNBUTq1xe+4G855f3Rq6270WA2FaPr+S/45dCZ/7T6ZlTdcgrdsFcHmJk
quPp9AbXQFlBoIsOrmK/AuX9J/DyLEINAlJZN2yNFd2m2Tp/XqOhqjuWtbnAVFG/29C/v9lD9
6dzR5BohEqHzqQVz//N37oIcI7+pSVl57EX/tMYWFR+xF849fo4ZCgx2WEKIbvd3GakO2yHkz
Eb+3V1W4AfSJyfhlKyshhNjsWEaPZ9Tjr8RGjxN224v0w4+n9dcfY33s2+9C3PDRXc51L/mHp
acfha9sFWowSN3br1DxxH0EW5rxFndNlmVrK7GlURSF9KNOJO2I40GjQWuLZ9htD2HtZQJtn7
E9Wlt8p7a8i65GZ7MB0ZkiLT991+U878qSTQ9+EEUCfsofvYu6915DDQbxrVrJktOOxLVs0WC
HJoToRl8uwNoiq3NH/P5NmMKdgl++GAkhxGZHYzCQsu9B2KbMIOJxY0jPJORyMvLhF2j9/Wes
E6eQsMNu6JOS8VWWRysNGwzEjRiNZ0UxrLONVd0Hb5J9xgWY8gvxla3q9JohI2sgH02IAWHKL
WDYrQ+Qc/YlKHoDpuzcLn0iAT+ekmX4qyowZuUQN2J0p3ozllFjmfDWJzR9/zWhxnoS99gH25
RtYq/r7AnYpm1Ly3dfdLquMa+g356rPwVqq6n/6N3OjeEw3hXF2MZPHpSYhBDrJxVMNiK6Brq
XI9ApqTjWme4nhBBi82FMb1/frI2zkHrgYaQeeFiszb1sEUtOOTw2Lds6eTrZp5/f5TqG9Ex0
iUkMv+txlp55NGGnAxSF3AuuxDJ6XP8/iBCDQGMwYi4Y1u1rkWCQuvffYOV1F4OqgqJQdOsDZ
Bx5YqelEZYxE7CMmdDtNbRmM/mXXIdn8QICdTUApB1xArZJvRvpHio0pjgMqemxz5O1dPb49Z
whhBhMfZlAKxvvsvmJ+P293n7EkJqBv6KsnyISQggxmNRwmOpXn+v0Zdc1fy6K0YhtyjY4/27
7A6qiUHTjPRiSUzEkpzLp4x/xl69Gl5iEedhItKau6zyF2NJ5V62g9KbLo8kzgKqy6uYrsM/Y
HsuI7reH64513EQmfvAN3tUr0VqsmIeNQGe191PU/cuQmkbhTfdSfM4JsffFNmN7LGMnDnJkQ
oju9GUCfUIfXmvIiO4D3csp3CmpBBvrifh9aGRLBSGE2KJEfF6cf/3Wpb3lh68Z+diLuBctIN
TaQtzIMehT03EvW4Q+JQ1zfiHm/MJBiFiIoSPU1IAaDHZqU4NBgo0NMKJ31zJm5WDMyunD6Da
dv6aKUEsThrQM9EkpvT4/afd9mPjeV3hWLkcXn4h1/CSMssxDiCGpxwm0oiiHAncDaURHmxVA
VVXVTvSHLbLSQcTnQ9H1LoFWtFoMaRn4ystkKyshhNjCaC1Wkvc/BM/aCsBt4rffGVNmDqbM6
Bf6ljk/RLeuqq7EmFfAyPuexj59u8EIWYghw5CZg9YWjxoOYczOxV9ZjqLVDZlEuLfUSITmn7
5hxRXnEqyvxTxsJCPue6rX08k1BgO2KTOwTZnRT5EKIfpKb6pw3wMcpKpqvKqqdlVVbWuT5y1
ZxOdF08ttrCBaHMZXVtoPEQkhxNYt5Gil6ZvPKbnqPMqffBB38dKNn9THUmcfRdI+B0UPtFqy
zrgA+4wdYq97V69k2X+OI1BdCUT3jl52zvGyxaHY6pnzCxnz7JtknXou5sLhZJ1yDmOefRNz3
uY5O8NbupxlZx1HsL42erxyOcXnnkSg7VgIseXpzRTuWlVVN+lbiqIoWmAuUKmq6gGKohQCbw
HJwF/ACaqqBhRFMQKvANOARuAoVVVXb8o9+8qmFBEDMKRl4F0tCbQQQvS1hk8+YOW1F8WOq19
8nAlvf465cPiAxWDOK2DkfU/hu/AqFJ0OU35Rp3oZ/spywi5np3OCDfX4q8o325E2IfpC0NFK
```

5XOP0/z1JwA0ffl/uIuXYBk9AZ198xuX8ZWvQQ34O7X5q8rxV1diaNsOTwixZdnoCLSiKIe2T
d+eqyjK24qiHLO2ra29Jy4EOibfdwMPqqo6HGgGTmtrPw1obmt/sK3foIr4fJueQK9a0Q8RCS
HE1stfW03Z/bd2ags21ONesnDAY9FaLFhGjyNu+KguxSb1icmg6fxPrGIwoktMHsgQhRhyfKU
lseR5reavP8G7avPcw1mf3HW9s9ZiRRefMPDBCCEGRE+mcB/Y9p8N8AB7d2g7YGMnK4qSA+wP
PNd2rAB7AO+1dXkZOLjt59ltx7S9PrOt/6DZ5Cnc6Zn4JIEWQoi+FYmgBgJdm0OhQQhm/UzDR
lBwxU2d2opuvHu9W/sIsbVQw+Hu24fY73BPmYeNIvf8K9sbFIWiWx7AtJlOSRdCbNxGp3Crqn
oKgKIoLwMXqqra0nacCNzfg3s8BFxBNAGH6LTtFlVV135SVgDZbT9nA+Vt9w0pitLa1r+hB/f
pF+FNqMINbQn0mlX9EJEQQmy9DBlZZJ91EWs6jEJr4ixYxoz/19eOBIOoagStwfivr6U1mkg/
/nRs2+xIoKYKY1YucSNHo2i1//raQmzOTIXDsE6ahmvBX7E266RpA7oEoy/pLBayzjyfhF1nE
qirxZSbT9yIMQzy+I8Qoh/1Zg30xLXJM4Cqqs2KokzZ0AmKohwA1Kmq+peiKLttUoTdX/dM4E
yAvLy8vrpst1SfD80mfJkypKYTqK8lEghs0gi2EGJoGMjPG7FxiqKQfuQJGFJSqXnzJczDR5F
5whlYRo7d4HmRgB/3siX4yldjSMvAmJVDoK4GrTkOY04+rgVzqXzuMcJuF1mnnk3CTrv/6z1l
dXEW7JOn/6triK3L1vB5Y0hKYdgdD+MpXkKgrgZDWgZxo8aiT+r98gZPyTI8K4rRWqxYRo/Hk
DY4a451Fhv2qdsOyr2FEAOvNwm0RlGURFVVmwEURUnqwfk7AgcpijILMAF24GEgQVEUXdsodA
5Q2da/EsgFKhRF0QHxRIuJdaKq6jPAMwDTp09Xe/EMvRb2eTdpBFrR6TCkpOFbs0q2shJiMza
QnzeiZwyp6aQfdRIphxyNRqdH0Wx4NZKqqjT8731KLj8bgIKrbmXl1efjLS0BjYbMU8/BV1pC
yw9fAVA891dGPfEqKfse1O/PIkRHW8Pnjb+pEccfc1hz/62EXU60Vht5l1yHPj0bY1JSj6/jm
Psbi088mIjPC4B9mx0Z8eAzsW3keiNQX0skGMSYkbXRzxMhhOjNp8T9wK+KotyqKMqtwByiW1
utl6qqV6uqmqOqagFwNPCtqqrHAd8Bh7d1Own4qO3nj9uOaXv9W1VVB/UfENXv36QRaABDVk7
0C5oQQog+pzUYe/Rl17dmFStvvAwA+4ztaZnzfftncyRC9XOPYZuyTadzqp5/nLDf1+cxC7G1
85Uup+zem2NV6sMuJ2X33YKvdHmPrxF2u1h9z03ROjUmM4pOh+OPX3AtmNerWEJuF3Xvv8H8/
Xfi771msOahO/DXVPXqGkKIrU+PR6BVVX1FUZS5RAuAARyqquqSTbzvlcBbiqLcBvwNPN/W/j
zwqqIoK4Amokn3oIps4hpoAEN6liTQQgjRj1RVxb1kIc75c1E0WmxTZ2AZNa5Tn2BjPRGPGwD
L2InUffBml+uEnQ4UvR41EkHRatHExaEoMhIlRF8LtbbEfh/XinjchFqaen4NlxM1HCL/ypsJ
NtSjMZshEun13suuv/+MzUwBqHjsXvQJSWSdek6vriOE2Lr0Zgo3bQnzJiXNqqp+D3zf9nMps
E03fXzAEZty/f4S8fs2eQ2zMTMLT8myPo5ICCHEWq75c/nnmP1j+7BqrTbGv/EJ1vGTYn00Rh
Om/CJ8ZaV4VhRjHTeJ1t9+6nQdbXw82WdciKLVEAkEiN9uZ5nKKUQ/0CckoTGaiHSY4aExmtA
ndd4OyrtqBc75cwm7XVjHT8Y6fjKKLvq11ZCcSvqRJ7LymgugbaKiISuHkfc/06tYWn79oUtb
zZsvknr4cejt8b19NCHEVkK+HWxEdAR6ExPorBy8K3s+JUkIIUTPqapK9evPxZJniE4Hbfjsw
079tHFWMk86i7hRY2md8wPJsw5Gn9pebCjtqBOJ33Zn6t57jfJH76Hy6YdYcvqRtP7+y0A9ih
BbEZWccy6Nze5T9Hpyzrk0lggDeFaWsOi4Aym59CxKb7iUhUfsTevvP8deD7tdVL34RKdzAlU
V+KvLexWJsZv10qbCYWiMpt4+lBBiK9KrEeitUcTvR9nkEegcvKtWoqqqbGcghBB9LRLBX1XR
pTlQXdnp2JRXgKpGiBs5hqQ9Z+FZUUzuBVehBvyYR4zGNnkaDZ/8l0BdTftJ4TBrHr4D25Tpa
OMs/f0kQmw19KkZNHzxP3L+c3F0yYRGQ8MX/yP14KNifZxzfyXQcS1yOMyaB29v+320Egn4CT
XWd7l22O3u0rYh8dvviiE7l0BlNPHWGE3knHUxWuO/38pOCLHlkgR6I9SAH80mjkBr7fGgRgg
1NaJPTtn4CUIIIXpM0WrJOPZUHL/93Kk95cDDu/RLP/IEzAXDcf0zD0NyKs75f5K0+z7Eb7Mj
GoOBYFOXDR8I1NYQ8fslgRaiD5nzCii67k5KLvsP/qpyjFm5jLjvKUy5+bE+weYN/T5a0aekk
XHCmZQ/dEd7B40Gy7hJXc7bkLhhIxj/2se4Fy8g4vdjGT2+T/aUF0Js2SSB3oh/MwKtKArGnD
w8K5cTLwm0EEL0uYSd92DYnY9S8cT9KDoteRdeg33G9l366Sw2knbfG9vUGQSqK9Ha4jFl58Z
et0/frss5mSeegT6x59vqCCF6Jn67nZj4328INtajS0rFuM7+zfZp6/t9jO4VvXY/eEWrpea1
5zCkZZB32fVYe5lAA5jzizDnF23agwghtkqSQG+AqqpE/sUINIAxMxvvqhLit9mhDyMTQggBo
I9PxD5je4bd9iBoNJiyc9FZbRvsr49P7NJunTiV0c+8Sdm9NxNqbiLrlHO6jGQLITZOVVXcSx
fhWb4ErTkOy7hJmHLyuvQzpKZjSE3v5gpgnTSVMc++xep7bybU1EjWKWeTclDnGrPGjCxyz72
M9CNPRGMyo7Ot//deCCH6kiTQG6AGg6BoULTaTb6GIT0T74riPoxKCCHEWq5F81l03IEk7rIn
5uEjcc2fS+LM/bCOHrfxkzvQGk0k7zmL+Bk7EAkEMKSm9VPEQmzZHH/OYfGJB6MGAgCYh41kz
LNvYy7o+SivxmAkaeZ+2LfZkUgohGEDM0E29LuqhkJ4VpUQrKvDkJGJuXC4VNcXQvxrkkBvwL
/ZwmotY2YOjr9+66OIhBBiy+ZaspDm778i1NJM/I67EmxuxvX3HyTsuBv2GTt0mVJd89bLpB9
5As6//6Thkw8AaPziY0Y98iIRr5dQawvG3DxM2e0jYL6qcvxrytDa7ZiLRqI1tVfc1cUnDMhz
CrElCnvcVDx6L2mHHYchJRW0Whx//orjr996lUADtP7xCy0/fkOwuYnEXffEvs2O6BO6zh5ZH
zUUov7jd1lx9fmowSAao4mRDz1H8j4H9vaxhBCiE0mgNyDi86Ixmf/VNYxZOXjfW9FHEQkhxJ
Yj7HGhGExo2vZ2dS9dxKKjZxF2OQGoeu5RCq6+jdq3X6bm1WfJu/R6cs6+JDaCpIbD+CrKsIw
ciz4ljdwLrwJVRQ1HqH3nNSqfeQgiEXSJSYx59i3sU7fFueAvlp5xNMGGOlAUcs65jOwzzkcn
e74KAbQtX/O40Zjjej1aG/Z5SZy5L9UvP42vrBSApH0OjO3f3FOtf8xh6RnHEHa2AlD75ouMu
P8Z0g45aiNntvOWlrDiqvNQQyEgOihScvnZxI0e1+drntVwGO+qFQQb6zFkZmPOK+zT6wshhh
aZx7IBEa8Hzb/cysCQnkmgtpqI37/xzkIIsRXwV1dR+cITLDx8b0ou+w/OhfMAaP3tx1jyvFb
DJx+QsNPuAFQ8di/+irLYa4pWS+Zxp2PIyCTsaKX84bsof+RuWn/9EVAhEgEg1NzEimsuxFdd
SenNV0STZwBVpeLxe3EvXtj/Dy3EZsC7aiVl993CwsP2ZNVt1+ApWdar83VWO855v8eSZ4CmL
/4H6gZO6oZz3u+x5Hmtymcfxl9bs54zugrUVseS57XCLmf7738fiQQC1P33LeYfsBOLjtmfBQ

fuQvNP3/TpPYQQQ4sk0BsQ9njQGE0b77gBik6HIS2z0z8mQgixtVJDIapefILVt12NZ9liGj5
+l8XHH4SntISwx9ulf9jrQWOMzgSKBANE1vlCbJu2Dao/QOtvP8XanPN+J+x2ou9QoMi7fCnB
hjpc8+d2uYe/uute0kJsbUKtLay48lwqn3wAz/KlVL/0JEvPPr7z/ugbu4ajBcefv3Zp95Wv6
lUsYW/Xz4KI10vY5+nxNQwZWV12UdHa4tGnZvQqlo3xriyOjnS3rfkOOx0sv/gMfG17Swshtj
ySQG9AxOf91yPQAMasbDwrl/dBREIIsXnzV1dQ/crTndrCLifupYuI335nWGfKaMq+B9Hy87c
ApB1+fJdqvoakFJwLuibF7sULiRs+KnZsHjUWfWo61inTu/Q1ZuVs8vMIsaXwrl6JY27n5NdX
WoKntOfL0HTxiSTsvHuXdsuorkX9Qi4nvoo1hNaZdQJgmzK9y7Tv9GNOxpSV26Xv+piLRjDyv
qdjS/G0NjsjH3oWc15Bj6/RE/6a6thsl7VCTY0EG+v79D5CiKFD1kBvQNjrQTH8+wTakJ6Ft1
QSaCGEQKNFYzQRbhutiTUbDNgmTmX8ax9T8fRDBJsayDzudALNjZiHjSR53wNJ2f8wNB0+k4P
NTXhKl5N60BH4K9bgXtI+Fdu+zY7Uf/QOAPqUVEbc8QimjCyKbrqPZWceQ6C2GjQacs+/EsvY
3u8dK8SWRtHru23X6Hv+VVGj15N1+gU45/8V24Ek/ZhTsE2Z0amfa9F8Vt1xHe4lC7GMnUjhN
bdhHT859rpl3CRGPf4K1a8+S6i5ibTDjsU+Y0c064mx2+fRakne/xAsYycSaKzDkJ7ZL2uTjR
mZ0T/8dUiidYlJ6JNT+/xeQoihQRLoDYh4vf96CjdE94L2lMhWVkIIYcrOJe/ia1l1y5WxNmN
uPpYx41F0OsxFI8m94GrQKGj0BiJ//0nCTrtjzMxF7fAF1bXkH1ZcfR7uf+aDVkv6MadgyMii
+dvPsU6ZQdrhx5E6+whCLS0Yc/MxtY0y2yZMYeIH3+ArL0Nnj8dcNLxTUi7E1spcMIy0w4+j7
r3XY20Ju+6NedioDZzVlWXkGEY9/gq+VSVozHHEjRjdab9nf00VNW+8QML2u2AZNRZ9Ugo1b7
xA7gVXYczIAkDRaGn941fMhcPRTUmk+YdvojNUeklRFMxFwzEXDe/1uT1lHjaK4bc/zMobLkE
NBtFarIx84FlM2T0fLRdCbF4kgd6AiM/zr7exguj0wJZfvuuDiIQQYvOXesjRmHILaP7pG8yF
w0nYaQ9MOfn4Ktaw8vpLSNhxV7T2eGrffAnXgr9i5+VfdQsZJ56Fv6KM8sfvjSbPAOEwta89x
7C7H8M6fhJaazxxRSPWe39jZjbGzOx+fkohNi/aOAt5l15Pws574PjzV6yTphG/3U5dto5yLv
iL2ndfw1++mvSjTiJ+x13Rx7f3cf7zN0tOPISw24kaDmPfdidG3PdkbPq1v7qSsNPJmrduj52
Tsv+h+KurYgl0628/Uf38o5iLRqC12nAvWUjVi+kMv+2hTlO7vatX4i1dgTbOQtzIMeiTkvvz
LeqWxmAg7bBjsU6dQaihIVqFu5dbdgkhNi+SQG9AtIhYH0zhzsrBu2olqqqiKEofRCaEEJsvf
XwCSTP3JWnmvp3aXUsXk3HMyajhMMGG+k7JM0DFo/dgGT0eb1kpzj9+6XJdz7LF1L79CtlnnN
+v8QuxpTKmZ5J64OGkHnh4t6+7ly5i0bEHEPFGi3m1/PQtw25/mIxjTgYg7PdR8+ZLFNxwF4p
Gg6LV4a+twjl/biyBjvi8sT3b12r45APSjz0lduxdvZKCa27DtWg+oZZmci+6BteiBfhqqjC3
1UFwzp/L4pMOjVXrTpy5H8NuexBjemafvic9oeh0WEaMgfX/3U4IsQWRImIbEPF6UPT/PoHWW
W1oDMZeVbIUQojNjb+ulpY5P9Dyy/fRNcbdiASDBOprCfs6V9kN1NXS8t3neJYvZcUV5xBsqO
1ybtjjxrngLzRmM5Zxk7u8rk9IQmM2k7zPQX3yPEJsaXyV5TT/9A2tv/9CoKmh1+c7//k7ljy
vVf74vbGCWRGXk6SZ+1H31kuUXHwGJZeeib98DTqLvf2E9e0t3aHdMmI0a+6/jYaP36Plx29Y
c98t2KbMQNFoAQi73ZTdd0unra6av/msyx/d+oqqqgTq67oteCaE2PpIAr0BEZ+3yxYIm8qYn
YtXKnELIbZQ3lUrWHLKoSw+/iAWnzCbRScejKe0pFMfz4piVl57EfNn7UDx+afgWrQg9lrrbz
9R++6rRPw+wm4XKAqaOEun8xN2mYnj1x8hGCJx5j7oU9qL9CTtfQBxYycw+rFX0CeldBujGgo
RqK8j7Pf14ZMLsXlwL13EP0fuw5KTDmXRMbMovuA0fBVr/vV1FUUDa2fXGYw0fv5RbCsrNRik
5pWnO1WkjiscjmmdKc6mgqJOyy68pSVE1vk9rXv7ZVCjG0qHXA5cixZgSM8k7bBjSZq5H4pej
38Tt44KOR0Emxq7fc1fWc6ah+5k/gE7sfjEg2mZ8yNqOLxJ9xFCbBlkCvcGhL1eNMa+SaANGV
l4Vy4nYYdd++R6QggxGEJuJ+5FC/GtWYU+LR3r+MkYklNp/OoTPEsXxfp5S5bR8MkH5J0fLRY
WbGmm5PKzYyNEzd98hmv+n0z88HtM2bk0//g1EC0olnvR1aAojHzwWapfegpPyVKS9z4QXUIi
9R+9i2vRfOo/fJuMY09Ba7VhHjEanT2B0hsvxbdqJeYRoxn9xKvEDRsZi8dTWkL1S0/R+MX/s
E2eQe75V2AdL9W3xdYhEgxS9eKTBKorY22OOd/j+HNOl63hNsSUX0TWGRegtVhQQyE0RhO65F
R0idG1x6GWZlp/+b7LeZ6V7YVUDWkZjH7ydSqeuI/WOT8Qv8Ou5JxzWadCY9DNcjeNJvadTJe
YTN4l16K12ghUV6KJiyPlwMPQ2BN6/CwQnXLe+tN3lD14O2Gng6wzzidl1sEY2ipoq+EwVa8+
Q9UzjwAQrK9lycmHMPH9r7FOmNKrewkhthySQG9AxOPus+qsxowsPCukErcQYvOlRiLUvft6p
wraqYccTdHN9+H4veua5NY5P0JbAu0rXx1Lns0jRpM6+0giPi+Oub+h6PVYJ05FozfQ+NnHtP
zwFRCtH5F3wdUoBgOe0hKcC+eRdeo5lN13CxGvh6rnHweixcWW33Mq+ZfdQNk9N+EtWUb9x++
Sf/G1AAQdray85kIcbeumm776Pxx//cqk/36HKTe//94wIYaIiNeN469fu7S7ly6CQ3p+nbDH
RfN3X+JdsSzaoNUy/PaHCdbXYkjLwJCWHt02qqaq03nm/M4jzpZRYxlx75MEW1vQxyd0+a5lm
7YtGqOp0yh01unnYUhJAyDY3IghNZ3SGy8j2FAHQNLM/cg4+ayePwzgmj+XpWceHTtedeNlaP
R6Mo4+GYBAXTU1rz3f6Rw1FMK9fKkk0EJsxSSB3oBwXybQWTm0/CyVuIUQmy9fWSlld9/Yqa3
+v2+RcexpJO01i+bvvuj0WvJ+s2M/a4wm0GrRWmykHXI0ZffeHJuOad9hNwqvv5Owy0nt2y/H
zglUVdAy53u0Njt177zC2Fc+ZOW1F5F5whkoBgManZ6mbz4j4vNCJEKouQmNyUzE56X1l+9RL
7gKRavFX746ljyvFWpqxFtaIgm02CpobfEk730glU8/1KndNnWbXl0nWFvdnjwDhMNUv/w0Cb
vuGX29oY7EPfbFXDQcrTkORasj2NKI0k1BVo3BiLHTqHO7+BnbM/alD6j76G2C9bWkzj6KhJ1
ntt/W7aLm1ediyTNA0zefkbjnrF49T3ffy6pfeoqU/Q9DZ4vWr9EnJuP3uDv10a6zvEQIsXWR
BHoDwh4P+uS+2RLBmJWLR9ZACyE2Y2GPu8u6RICQ20HCzjPJu/R61jx0B4TDpBx4GPHb7Yx39
UoMGVmYC4aR85+LCbU0U/3SU7HkGaJTSYPNjQSbm7pc2/n3n9imTEcXn4A5r5CCK25ixZXnEW
ptBkUh88SzUPTRaZ2K0YgaCgKQvM9BKNpowSGN0YSi06GGQp2urTHH9dl7I8RQpigK6UediGv
RAlp/+Q40GrJOOQf79O16dZ2I14s+NZ3ssy5EZ0+g4ZP/4lr4F0rblGtFp0PRamj8/H/4K8oA

SNrnIGxTtb2OOX7bHYnfdsfun0ejwbVkYZf2jmute6K7egn61HQUffTrsT45lYJrb6f4nBNir
5sKh2MdP7lX9xFCbFkkgd6AiNeDxpDVJ9fSp6YRdrQQcjrQ2ewbP0EIIYYY3YelgmT2/dfBl
IPPRY1GKTsgdsI1FYz5uk3MGTmEKytZtExswi1NJO872zyL7+BrNPOw1O8hJo3Xuhy7VB9Lba
JU1i3drd92ra4/vmbgqtvRzGZWX3PTdHkGUBVqX75KfIuuQ5DWgaoKmooRNJeB5C8b3slblN+
EdlnX0rFo3fH2hJ334e4EaP78u0RYkgzFwxj9BOv4FuzCkVvwFxQ1GWWnb+2Gsefv+L863esE
yZj326n2PZTANYZ21OYmk7tmy8SbKwnedYhZJ50JvrU6NRqdDpafvmeUHMjiXvsS9jpoOnL/5
G01/59+iymrBzid9yVps8+6tQeN7x3v9PxO+yGLiGRUEvbZ4pWS+45l6I1mWN9Enffm/Fvf47
rn3nok1KxTZkhM1eE2MpJAr0BEa8nOu2wDygaDcacfLwrl2ObPL1PrimEEANJn5DIiHufouze
m2n+/kuyz7oYfUIi5Q/cjj45leSZ+7LyuosZduejLD21fR/Zxs8+RGu3M+yWB7BOmkryfrNp/
PRD9ClphJ0OIqEg5lFj0Wi1ZBx3WjTBVlWsE6eRuNteJO21Pwm77kmguhLfOpW9AXQJSYx95U
PUSJjkfWdjLihEa7HFXtfo9WSd/B9sk6fjXvoP5oJh2KbMQJ+YNCDvmxBDhc5mxzqu++J5IY+
HNQ/eQd07r8TaEnffhxEPPI0+PhGAcEszJZeeiRqMzvTwLF9KzvlXkNg2vVpRozM+sv9zES1z
fkSXkEDRjfd0mmrdFzQGI3kXXIm3tARv8RLQask+4wLs2+zQq+tYRo1hwtuf4fjrd8JuN7Zp2
2JbZ22z1mgifsb2xM/Yvi8fQQixGZMEegPCXg+abtbtbCpjVi6ekmWSQAshNluWkWMY9ciLBB
pqafz0I1bfcW3stdY/fib3gqtw/PELhswcIh53bLS44eP3SJ41G63BTOap55K832ycf/+JITU
d29RtaP7qEyqeeADLpGmMuO9Jwm4Pjrm/svKGS9EnJhO/7U7ok1Iwjxob/cLcMaYx47GMHLPB
uPWJSSTtvjdJu+/d92+KEJuBSDCI65+/af31B7QWG/Hb7Yxl9LjY6/7VKzslzwDN332Bd8Vy9
NO2BcC9ZGEseV6r9q2XST3kaOIKhqGLT8Q+fQdCLU3EFY1AG2ch1NqCZfK0TueE3G5cC/7CX7
kGY3Ye1knT0Fl6t67YMmoc49/4P/xlq9CY4zAXDkezCVuPxo0YQ9yIDX9+CCFER5JAb0DE60H
poyJiAMasbDzLl2y8oxBCDGFasxnvyhKqX3yiU7saCBB2u9DGJ5B/9c0oqoI2IYmw20Hzd19S
9/ZrOOf+Suap51B21w2x80yFw0ncdU8iXg/O337C+dtP5F54FY2ff4wa8KMxGFHDIQyp6Yy48
1GWnnUswfpaFJ2O/CtvJm70+IF+C4TY7Dh+/5nFJx8KkQgQLSw24a1PsYyJ/v5EgoFuz+vYru
2mboDWYoklriGXk4jXTdk9N8bqHOgSkxh220Ox/mG/n+oXHqfmzReJGz4az4plZBxzCllnXoh
2nUELd8ky1GAAc9FItKauMwINickYEvumVo0QQvSUJNAbEPF5+3YEOjuP1t9/7rPrCSHEYPDX
VtP09SfdFuFS9HrMeYWsuulyQq0tpBx4GIm774MaCJC4xz4YMzKpeOKBTuf4Vq1AN/uITm3Ov
//EMnocroXzyD7rwtgesbbJ05n04Xf4K9egtSdER530+v57WCG2AGGfl/LH74slzwBhZystc7
6PJdCm/CJsU7fFOe/3WB9T4XDiikbEjs0jRqNPTiHY2BBryzn7UhRdNIEOu5zUvfd6pyKBoeY
mfGtWxY7di+cTCQRImrkfrn/+JmnmfkQCAdyLF2Bvqwrur6+l6etPqXj4LkKtLaQefizpR52M
rR/2bvcsX4pj7m+EPS5s07bDNmEKik6+Hgsh1k8+ITYg7PX22TZWAMbsXLxSiVsIsZlTQyEaP
/uYrFPPYc39t8badYlJxM/YkWXnHE/Y6cCUX4QhLYOwy4F92rY0f/cFSXvOIvLKM10v2uGLPU
S/zHvVlQy7/SGS1tmaxpiZjTEzu1+eTYgtkRoKEWrpWuU+5GiN/axPSKTwxnuo/+B1Wn7+Htu
0bUk/+uRogb423rJVZJ5wJiFnKyFHK+aiETR99wWJu+3VdsEgYZezy30igfZR7LDfj+PvP7CO
HkfCznsQ8Xpw/P0H9h12ifVx/v0npddeFDuuff0FtHHWPk+g3cVLYsUOAdBqGffKhyRsv8uGT
xRCbNUkgd6A6Ah03xQRAzCkpRNqbiTkcqKz2jZ+ghBCDCJHcxOrly7G1dpCzrAR5I2MVrjVJS
aTcuBhNH/7OflX3oxn+VL0KWkk7rYXrb/9RNjpwDpxKvE77kbV848T8fswFQ4j87jTMGRkk3L
g4dT/963YfTTmOJQOn7X65BTSjzoRc34RWot1wJ9biC2Nzmoj65SzWXHV+dEt3SIRUFUSdtw9
1ifkcLDm/lvwla3CMmY8znl/4F40n7EvfYAhJVplW/W6WfPQHWht8WitVurefQ19ShpqJDrir
E1KIf3YUzot0UCjwdoh8VVQSNp9byqeuJ9QcxO6xCRyzr4kthUWgHvBX12eoeGTD0g/6iTiio
b32fvSOueH9uQZIBym4vH7sE2Z0akStxBCdCQJ9AZEfF6UPpzCrWi0mPKK8CxdhF2qOQohhrD
m+jqeuPpivnnvTQBMcXE8/tFXJHjcuJctIm7kGMzDRlL94hNYJ88gedbBNH31SWxf1aS99u80
Ou1btZL6j98jzRRH+tEnobXZafnha4w5eaQefBSW8ZMx5xeBApbR4zEX9t2XZCEEBItGUvTIi
wRXLEMxGNCNHIvbaCK+7XVv2UpafvwGAF9Zaew878qSWAJtzMkDrZaws5WwMzp6nXrI0ahtU7
aVUBBT4Qjyr7iJuvdeR5eUQsZxp8ZeB1A0CuUP3xUbqQ41N1H+yN2Mebb9j2r6tvt1ZMzMRmf
v221Ag02NXdsa6lCDIei78RMhxBZGEugNiPj6dgo3gCm/ENfiBZJACyGGtJIF82LJM8DwMeNx
ffAGVW+3V+lNPuBQ0o45BSUUIlBXQ6i5Ea3FgqmgiIjP2+WaroXzSNxjP9SCIlIOOJSk3fZCM
cVhLhyGMT0T66ixA/JsQmxt/M5W3KtW0njdhbEq2vqUNJJvfRAmTQVAUTTdnqto2tt91VUUXn
0rDZ/8l2BjA0l7zSLschLxeYDo7BTn/D8xxCeSc86lqOEw7sULsE1v/84Tcjq6TPMOu5ydppN
bJ0/HlFcYWzutGAzk/OfiWCIP0WnprsULcC9dhM5mwzJhKua8gl69Lwk77U7F4/d2ass8+T/o
bDJLUAixfpJAr4caCqGGQih9XJzGlF+Iq5upSUIIMZQ01dZ0Op617/44nrq/U1vj/31A4q57U
3bPjehT08k9+xKKLzqNrNPOJa6bbaXMhcMJe92Y8osIO1rRZuVgysrt1+cQQoDf5cL73zc7bU
EVbKgjtPQf2OcAAMyFRdE92j/7KNbHNn17TMPai4jpLFZWXHkuCTvtjimvkPqP3sE+Y4dYkh1
2OdDb42mZ8z0tP36DxmQm49hTUX2+2DWMGVkoBgNqh3XRisHQqa6BfcoMRj7yAu6li4j4fcQN
G4ltu507PVPLL9+z5LQjYvUTTIXDGPvi+5jzCnv8vlgnT2PMs2+z5qHbCTkcZJ9xPkl77d/j8
4UQW6d+TaAVRckFXgHSARV4RlXVhxVFSQLeBgqA1cCRqqo2K4qiAA8DswAPcLKqqvP6M8b1Cb
etf46G1HfMhcNp/u7LPr2mEEL0Jc+qlYzXa7nvuptp1Oh46qlHSIpPIKiqxO+0Gyn7HUKgvhZ
FUVCMBnTxCQTra6l87lGG3/kolc88TLChnvRjTqb2zZcA0MRZyDztXOJGjGHp2cfjWTQ/ur3N
7Q+TNHO/LpW0w24XnhXFhBytmPILe/WlWAjRmVGnI9JQ16Vd43TEftZabBRcezuJu++De+kiz
MNHkrDjbhjalmUA6JNTyTrlHGpee46Iz4t9xvYk7rFvp1oFIa+X9GNOIXHXvVAMRgyZ2YRa2w

uYWUaPp/DaOyi9+Ypo8qvVUnjtHVjW2Y7ONnEqtolTu32eYGsrq++5sVPxQd+qlbgW/NWrzwq
t0UTSzH2xb7MjaiiIPjGpx+cKIbZe/T0CHQIuVVV1nqIoNuAvRVG+Ak4GvlFV9S5FUa4CrgKu
BPYDRrT9ty3wZNv/DriI14umHwpIGHPy8VWsIez1dLufohBCDCbXkoUsO/t4dMNHozWbSVy0g
Ecff57QmlUol9+IotXS/P2XmIeNJOLz4i5eQtEt9xNqaiTQUEck4Cf/yltwzp+Lp3gx+ZffhN
ZmwzxsFKbCIpadeRyeRfOB6NrH4vNPZtLHP2Id0/7lOdjSTPnDd1H98lMAaO0JjH3hHexTB+W
fAyE2e1pTHOlHnsDqO67r1J647U6djhVFgxqJEGxqwBwe1mVatxrwo7XHk3nqOWi0WsJuF2GX
K7aNlc6egHXUGJZfcEpstNuYV8Dwux6PXcNbvpraD94i94IrUYNBFL2e2g/eIn7nmcQVFPXoe
VS/j0BtdZf2TgXBekGmbAsheqNfE2hVVauB6rafnYqiLAWygdnAbm3dXga+J5pAzwZeUaPVJn
5TFCVBUZTMtusMqIjPg8bU9xUkNHo9ptx8PMVLsE2e3ufXF0KI3gr7fQSqKlAMBhzFS3EedTL
vvvMmbreLQ088DeN3X5Cx6540fPg2TV/8L3rSV59gm74dhtQMgnW1rLzuoti6Rn16JvmX3oCv
tITKZx4m1NqMefgoRtz/NO5Ff69z8zC+stJOCbR78YJY8gwQdrRQetMVjH/tI3T2hP5+O4TY4
qjhMCgaMk85m4b/vYfWaiPt8ONja5chOutj1e3X0PjphwA0fPQO9m13YvQTr6BPTAYgUFNFsK
GWxD32A1RCzU2svudGUvY7CIjHX1dD1UtPd5oq7l+zGk/JMhK2iybr3tIS3AvmonrdxI0ai6d
4CZ7lS/GuLO5xAq1PTSPjmFOoePy+9kZFwTJ24r96n4QQoicGbA20oigFwBTgdyC9Q1JcQ3SK
N0ST6/IOp1W0tQ14Ah32ePq8gNha5qIROOb+Kgm0EGLQeMtK8VdVoDGZafj0v1S/8ARaqw3dT
fdx6zWXxfo9fP0VPPnGh/hKlrUnz22cc38j98KrCDTUxpJnU34RmSecTu07rxJqaST92FPwrS
6l5cev0ZjM6JKSCa1T+VafnNrp2F9b1SVe96L5hFpbJIEWYhMEmxuoeeslknbbm7yLrwVFQ/M
PXxGoqSLtoCMAcC9bHEue13L8/jOuRQtI3HkPAOImTEVrsdLy3ReEWpqxjJvIqIdeQJ8a/RoX
CQQJVJazLl9DbexnjdFM3mU34ClejGvBPKyTppJy0BFojJ1n/YXdTjwrlhPx+TAXDseQlh57T
VEU0o85GSIRql9/AUNKKgVX34p1wpS+eLuEEGKDBiSBVhTFCrwPXKSqqqPjumJVVVVFUdT1nt
z99c4EzgTIy8vry1Bj+noLq44sYyfQ8uO3ZJ9+fq/PXVNSTN6IUf0QlRCiOwPxeTPQWub8wLK
zjyfsdKDodGSdei6WsRMJ1NXw14/fdenvKCvFnpJCzrmXgQqqGqHuvdcJ1teCRhOtcNEm/eiT
WHXHdbG1iZUrisn+z8Wkn3A6xsxsht/xCMvOPRHCYQAyTz4by6hxne5nys7vEoN9253QtY2CC
bGl6q/PG21iMrkXXEXFw3dS9fxjACTuthcJu+4Z6xP2uLs9t2N7uLWZ+v97H9vk6Whtdnxlq0
Cnjya4Kan41QjGvWbhf/lp9KnpRHw+ws5W1IJhsWtojEbqP34X7/KlAPjWrMK8bAn2bXaI9Qn
U1VJ2703Uvf8GAKaCIkY/+TqWDpX6TVm55F16PRknnIHGZEKfIOuXhRADo98TaEVR9EST59dV
Vf2grbl27dRsRVEygbWVLSqBjiVZc9raOlFV9RngGYDp06f3KvnuqYjXg6bfEuiJVD7zCJFAA
I3B0OPzfvjoPW4+6Uhuevlddpl9WL/EJoTobCA+bwaSv7aakkvPItxWPEgNhah85mEKrruD8k
fuwRJnAeCYU85kfF4epsIRNLgcJHq81D/3GBG/D02chbwLrqLpu8+xjJmAd+VyALRWG4G6mk6
FfQAaP/2Q7HMuZdWd15E2+yjGPPMWweZGjFm5WMdO7LK3q2XcRAquvpWy+25BDQYxFRRReP1d
6KyyTlFs2frt88YfoHXO93hLS2JNzd9/ReKes2LHhvRMbNO3J1BVgX70OIIrl6PR6zFm5cT6h
Byt6OMTKH/oTiBa1yV75FgC9bUYUlJRdDr02+2KbtR45v02B5vdzpQddsHdoR5r2OWMJc9reU
uWEna2b23l/PsPTIXDGXbHw6iBABqLheo3XqDo2js6fW9SNBqMGVl99jYJIURP9HcVbgV4Hli
qquoDHV76GDgJuKvtfz/q0H6eoihvES0e1joY658Bwt5oFe7+oLPaMGbl4Jw/l/gOf3HdmE9e
fo7RU7fhy7dflQRaCLFJgo0N3RffscVjmDCF0enpnHHhZWxnt2Gcti1VixcyOieP8svOiq1rj
HjclD9+L6OffJ1wwIvWaifrtPOo++9baExdiyNqLVZc8+diSEph0dH7xdqzz7wA64TJXfrrrD
ayTjmHxN33Iex0YszN67T/qxCid9RwEMfvP3dpdy9Z2H6g1WK54Cr++OxjfvvhW6Zssz17HXw
EdCgkpvp91H/0buzYX1FG0zefYt9hFwBMegONjlaaV69iSnY2Ea2GuT9+y4y92n/v0XX/1bPj
tqGK0UjD/32AZ9kiADTmOEY88CxhZyuadZZ8CCHEQOvvEegdgROAfxRFmd/Wdg3RxPkdRVFOA
8qAI9te+5ToFlYriG5jdUo/x7deYbez39ZAA1jGTKDl5297nECHw2EW/z6Hs265h1fvvbXf4h
JCbHnC4TCVK0twNjeRlZKCITObQHWHyT2KwqrqajJPPx/9vN/YZ9ZBRFqaqXntObRrVmG+6Bq
yz7yQkKOVQF0N5qIReFcU0/rbj1gnTiXs9ZB0wGFYJ0/DkJJG7ZsvdKqGmzr7SEJuJ1XPPNIp
rspnHiF5v4OxTZrWJWZFpyNuuCxXEaIvKHoD8dvtjG91aad267hJsZ9dDgeP3HY9i36fgzU+g
f8uWcSfP//A7U+8wNq5H8HGBizjJ5O0xz6okQiBmiqavv0CnSXaw9HajDXgR/v6M4TcLgDGjB
5HePv2at9ai4WkmfvR9M1nsbakmfuhjWvfCstXXoZn2SLixk9Ga7Xh/vtPql95Cvs6e0EHmxr
wla1CExeHuXB4v35vE0KItfq7CvfPwPo2Up7ZTX8VOLc/Y+qpsMuJJq7/tpmyz9ieymceJu+i
a1A0mo32X1O8FHtSMrkjRuFxOWltaiQ+SdYDCiE2zO/18uXbr/LYlRcS9PvJHT6Su+56gDWXn
0OotRlFr8f2n0v4tbYGQ3Mj9unbYzDGEbGEyTnlHNxLFuL4/WcMaRm4liwk9cDDWXH1+VhGjS
PtsGOB6B8cXfN+x1QwDEN2LoU33ot70XxQogXC6j58i6SZ+xHx+7rEt6nbzgghek7RaEg8+Gi
cf0e3lwNI2v9Q9CNGx/rUNTeRk5nFmfc+jL6hjlBSCt8vmE91XS3ZbX3iRo3Bunoi5Y/dC5EI
5uGjKLjqFjC3FQBTQf30Q0y7742/aCTacATlx68wd9iDOlBXiy4xifyrb8VXUYYxOw9fyTL8d
e0zY0JOB9orb+X/fv4Bh9PJ7qddgLm8lIijGeLjAXAvX0rxhafiLV4CGg3ZZ11E9unnd7uXsx
oOo2i1ffyuCiG2VgNWhXtzE3Y6up2K2FfMw0ai6PS0/vYTCTvsutH+JQvmkTNsBIqikJaTR8W
K5cRvs32/xSeEGLocTY0s/esPShf/Q3bRcMbO2I6UzPZ1gH6vl/KSYhwtTej0BuZ88hHn3f0w
5jgrPo+LSp2BzOfeIVhfQ6XbQ0ljPRPHTqJ08UIMlVXkDB+Bu7kRrcdDRkIS3g9ex7N0MXmXX
EfN6y8w7pUPKb3hUlZedxGpBx1B1QtPAGDIzGb43Y9TcvHpaK02kvY+AN+qlXiWLcY2aTrG3A
L85atjcWriLJjyCgb43RNiK2Qy0/jbT5hO/g+OQBC93gCNdbjLy0ieHv0uYY2zMDsnm/o7ro2
dttu+B2GMT4gdh30+6v/3Pqmzj0SXkEjL91/R9O0XmCdNxxifgFmnRTdrNis8XqrLVmEwmsg/

+hQSdO3JqzYpBd3hJ9LobKXRbCM5Mwv75G3Qdqgn6xg5jnBTA7vuuz8Bn5/E9Axas3PQp2VG4
/D7WfPo3Rh33A3tWZegDQVpfv057NvsQNKue8Wu07JkIY2f/Bf37z9j3XkmyfvOJn7UmP56l4
UQWwlJoNcj5GhFazZvvOMmUhSFxF33pOb153uUQK9cvJD03Ghl2tTMbCpXljBOEmghtjrBYJD
3n3qEV+9pX8qx0/4Hc9ljz2FPTKJs+VK8LhcVK5bz+1ef4WxuYp9jTmL5gnm8/ci9AGg0Gi59
9Fm0Gi2PXXUhVz35EtcfdwjhUAgAe2IS1z37Gg3z/uB/c35in9MvJOPvP3AvX0LGcacRaGgg8
9RzqHjsPuJGjgWtFsJhAtWVeEuWgUZD2OWk/oM3Sd73IPKvuAl9ehapBx/JqtuvxblOPsa8Ak
bc9RjmwuGD8j4KsTXx1tXgycrl6y8+ZfyIkTgjKj+sXM7szPYCYfEKLH3jhU7nNX/+MaOOPjl
27G9qJPf8K6l96yWCjfUkzzoYnT0eRW0rHKgzUKloeOzKC4m0FRNMSs/gqidejF0jkJbBXx+/
zxM3XBlrO+eWu9npoPbaLhq9no9efZGs7Bzsdjtvv/gU51x3O67mJuIzMgk1NxKedRiVLc3UL
FuC0RxH3ukX0ur2sHb82VVZzqrLz8azNLqO2jnvD9xzf2X4w89jTkrpi7dVCLGV2vjc4a1UyN
GKxtx/I9AACTvtTuuvP+FaNH+jfUsX/0NG20hNQmoateVl/RqbEGJoqlxZwhsP3Nmp7edPPqS
8pJh3HnuAS/bfncW//8KjV16Aqqqk5eShM+gxmc3857b72P/kM7Anp+BubeW9Jx/i7ufe4P2n
H40lzwCO5iYW/zGHpP++wUxXMz6Ph/iddidYX0fp9RdT/95r6OyJpM4+kmBrCxnHnho7NxIMd
Joq2fj5xzjm/kbiTrsTv+1OjH/1I6Z89ScT3/ua+HXWMwoh+ok5Dq/Xy55eBxk/fU3Wd59yQH
ISHm3718CAxw1q18LfAXd7dWxDUjJl99yIr6yUsMtJ3TuvEvH58Wuj4zEOr4ePnnsyljwDNNX
WsKa4vep2U2UFT9/SPsoN8PQt19JcVRE7bqmr5dj9ZrFj8ULGff0/ztttD6qWLSYUDERf9wep
93p47KoLefmum3nmxit5/+lHaW7bRQDAU7w4ljyv5fjle1zLFvfqrRNCiHVJAr0eYUcr2n5Oo
LUWK2lHHs+Kay9CbdsTdX3KS4pJz4uOQCekpFG9ZnW/xiaEGJoCPm+nZBcgzmZjzfJllBUvYc
Ze+xEKhzn6wispmf8Xv3z6ESv+WUB9TRVPXXcZSSlpHH3B5fz5zRdM331vtEYjrQ31Xe7T0tC
AMSsH7x+/kKXXUXrdxTh+/5mw20Xzd1+w5t6bsE6cStNX/4d+bT0GrRbLmPHEd5hVY8jMJmX/
Q9G1rVvUxScQN2wkhhSppCvEQPH5vCS5HDRvuwsfWhL4Nnc47oJhpITbP0u09njiOuyzDNHfX
0Ni+2itr7ysS5Ld8OkH0FbfIBJRaWns+nniaW2J/dzU2NDlMywcCtHY0BA7TtUouO+7hUBZKa
GWZlxvvECeo4lQ233cbgcfPf8k7tbW2Dl///gtdRXlsWOlbdeAdWnW0y6EED0lCfR6hBytaDr
8JbO/JO6yJ4qiUHrLlajd/OUXousZm+trSUqPrv1JSE2ldo2MQAuxNcoqGNZl+caJV9zAmuXL
+PPrzykvXkpKRibP3nQV5SuW01xXy6v33IrVFs9uhxxB8fy/eOr6aAL91sP38OSdN7HfcSd3u
c+k7XfCtXAeAGpDHcEORYAAvKUlRLxunHN/Q2MwYp0yg8Lr76LiqQdJO/RYCm+4m9zzryD1kK
OJGz1OquMKMYiMGi3lKNx6/RX8+Pn/8el7b3LjDVfR1GHL9ojTQcqBh5O838EY0jNJ3GNfsk4
+m2CH5Fex2btcW5+WCcbo77dZp+GAQ47s9LqiKIzusO44PS0Na4d11QDW+ATS09Njx9o1q7rc
x//lJxjbiq5qFQ2lixZ26eOor439rLPbsU6c2un1xN32QjsA3+2EEFs2SaDXI+xyou3HKtxrK
RoNuedfQcsPX1N23y3dJtEVK0tIzcpB2zYtMj45lcaaqn6PTQgx9FgTErj8seeZdeJpJKamsf
cxJ6CqEb5882VmHnEsux9+DIqi5bhLr2HEpCmx83759COm7rYnf3z9eafrLfj1ZwoKijjpyht
Iz82jYPRYLnnwSZKWLoS2mTG67tYLajR4V5diGjEG/ZgJ5F10NatvuxrHrz+x/MJTMWRmYZ+x
AxnHnop1zPh+fU+EEBsWUCO8/84bndqCgQCLlrZPZw6Z46h+8Ql8ZaUk7LwHwaYG1jx0B6EOC
afDnoA+r7D9Ilot2sOOIxCMjihrjEYm5eZx6sVXkZqdw/AJk7j+nodJ61BTxurzcuW1N5OaHV
1/nZqdw5XX3ozV6471MSQkdHkGfUZWbFuXBIOe7Xbdo0ufnOz2Nd1hjZbkfQ8i67TzSNx9b7L
/czH27XYm0g/VuAON9TT/+DW1775K628/E3I5N36SEGKzJUXE1iPkdAzYXym1FisFV99K2f23
4q9Yw/A7H+l07/KSZaRm58aO45OSaaqtGZDYhBBDT97I0Vx0/xOcet1tqKrKZ6+9yJk3342ju
YnVSxfx1HWXoSgKexx+DIVjJ/Dlm6+QkJpGKBDo9nq+ijVMr69iu0eeRaOqhL/4mMZ3XwXAkJ
6JKSePlIOOoOHjd2PnZBx3Glp7PJlX30KweAkp6J2mJbZ8v3XDL/zkS73EkIMPJ1G093yZtC
0J5PNPh+aMy8m+PKT1L33OvqUNEwXXEWD18vabyBldXU4dtmLEYlJaMNBWgwm3vrs/7hop90B
8DmduNMyqPhtDtN22xO/z0t1UxOm1HTy2q4RQEH31P1cNfsQAglJGFqa8D91P4EHn4vFYsrJx
5CVQ6BtXbSi05F22DEoxmgirtHpOHCvfamrqWbhH79iMJk49rSzyUtIbL9GbgHeBX+hMRkxZu
Wh6PWoGi1xvSxcGHK04vhzDg1f/A9zXiFJe87CMnpcp9dX33Uj9e+/HmsruPo2sk49R7bOEmI
LJQn0eoRdjn4vItaRLj6Bwmtup/qVZ/h71g4UXn0bibvtjapGqPn1J4aZjKiqiqIoWOzx+Dxu
/F4vxn6sFC6EGLp0ej1JaelUl60iMSWFR644n0POPJ9PX3k+1uert17luEuvYfIOO3H2eZfgr
Cjnpvsf54Hbb8DR1AjAsPGTqPb7caRnU+howfXCE2QecxJx2TkQiRB2u1h6+lGkzj6CUY+/jH
d1KYa8QgzZefhrqvDO+YnWOd+Tc86lneIzZGYjhBga9KrK4cccz6qp0xmRmUlEUfh1wd+MHzU
q1ictNZXHn3mc/B1mUlQ0jNWVFcz730dcduf9sT72pCRee/B9aspWoyjR8eCzb7+fUNvUanN8
InO+/4Yv320f7f4OuP759mOHTo/p6FNwPf0gqCohRcF61sU4dIZYn7DfT+75V6L6fUR8XvRpG
aiKhqDTAYCiN5BmjuOUMaPx77UvukiIuLoa4gzt17Bm5RDaZU9afvoG1eGAhGTid94DUzf7RG
9Iw6cfsvKaC2LHVS89yYR3viCuaAQAnpJlnZJngLL7byFxj32JGzaiV/cSQmweJIFej+gU7oF
dJ6Mxmcg+8wKcf//Jmgdvp/jC0wCVZI2OdK0G3703Yjr/KhRzHPHJKTTX1ZKRXzCgMQohhg5/
SzPhqgo81ZWMnbEdS+f+1qVP0OXggn33p/KCUyASwWCz89CDT/DUqy8yZtwEtp22Da2tzdx4+
w2ccOGVpMw6hEyNhvKHOlf69q1ehS4+AW8gyC133MSlt91L6NVnMI8cQ/J+s3GvWBbrq7XFk7
Tnfv3+/EKIHlJgQk4uCe+8hP/DlQAcvMe+pFutsS761lZOPeRwQq3NeP75m+zR49hp2gxMzU2
xPmGXi90OPhKDyUTA58OWkEjxvD/ZfY/o3suO1mbmfPZxl9uvWbYk9rMtPoGGYSPIf+BZ1IZa
lJR0akIhUuzxsT6qTkfLT1/T+OlHoNVizMgm99Lr2wsWOh2seegOUmcfgUanQdHG4fb5cC9ZS
NJu7ftAJ4weR0KH0eLeCtTVsuaBWzu1hZoacS9eGEugw21JfUdqIEDY49rk+wohhjZJoLuhqi

phl3NAR6A7sk2ZgW3KDCIBP4pGy/0Xn832e8/C9NdvBL/7AsOsQ7AnJtNUVyMJtBBbKXfxYlb
ccCmuP3+lIDObiZdcz3d//8XfP37Xqd9u02ZQedV5seOw00HD/bdyzpHHU/PqczS++hRxY8bz
1BPPo0lIxBcIodOAbdq2OP/6HQCtzU7qIUfSVL6Gr4qXUTh6HKEP3kRVVUw5eZTdezPjXv0IQ
3Iqik6PbfJ0LOtU8xVCDB6tTofjp2/xr1oZa2v59nOSZ3b4Q5ei4vn6EzzLFhM3ZjzO999An5
SM7bz2/ZpzExJwJSSQZtBjSE6m3uNh9D77Y2ybqmwxmRk2cgwNVZWd7t+xQFh80I/70/9S9t2
XsbaE3fcmvuPUao8nmjwDhMP4K9fQ/O1nJO4UrfCvs9mxjBlP5ZMPdLpP4sx9Nu0NWg81EiYS
6Fq1W+1QvdxUMAytLZ6ws70ieNzo8Zhy8vs0FiHE0CFFxLoR8ftAUdB0mAo0GDQGI2i11FdXk
pCWgW77XQh9+TFqOIwtMUnWQQuxlQo6WllxzYW4/vwV46TpeI8+lW9/+p4J2+5AWk5erF96bh
7WDvuxruWvKMOUW0CwrWKtZ+kiTIEAlnAYc2kxqCqWMRPIvehqcs+/gswTzyRosfLMe2+Rklf
Afvl5tH7yAY7ffiISCDD2pQ+wT9+ezONOI+OoEyV5FmKoCYVx/PFzl2ZP8eJOfSyjxmLfbie8
pSVYx08mYZc9UQP+WJfE5GSmJCaQ0tJEXGkxo80m8tMzCLSV9zKqKocdeiQWe3u17jGTpjIsP
SN2HG6sp6VD8gzQ8t2XhBvbK/37VhZ3idX556+o4ejnmTEji7SDjyJuZFt1b62W9KNPxtSxwF
kfMGZkkXP2JZ3aNHEWLGMmxI7NBUWMfek9rFOmo+h0JM7cl5EPPYu+l1PFhRCbDxmB7kbY6UR
rsW684wBoaajHYDBG1zqbs8GeQHjeb1gTEmisrR7s8IQQgyBQU4Xr7z/R2uzU7TyT+66/AoD/
vv4SR194BTnDRqCiklc0HM3yJV3ONxUU4S8vI3GPfWj+9gsAgs0NRHxeIn4fIbOV0Ha7oK5ei
SbgxpicQvN7r3NyXi46dyu1r0fXWSsGI4m77S1VtoUY4tRwGNvU7fCtLu3Ubswviv2sMZlp/u
Hr2PZ13pJlmAqKGHZHezHAiMdD/eqVNFrj8Wn1pHvcZJWvxry2+rVWQ7rbyc3nXUy9CgadloS
6GhI07eM1irb7r54d2+NGdv0jXPz2u6Bv2xFA0WiwTppKxolnEqyrQWM0ETd6PNYJU7qc92+l
HXYM+uRkat58CXPhcDJPOKPLHwntU7Zh3Ev/JeRoRZ+UjHaQZjAKIQaGJNDdCDsdaOOGRgJdW
76GxLQOeyOOHEto/lys9nia62o3cKYQYksVUFV0CYkY99iPV196ttNrjeVlzNplNxpfeJyg14
v+lHPIv+Im1jx4O2owiD4llcwTzqTsnpvIPutCmr/9An1KGuGWFrQWK+aiEay5+TLSZh9B9Wv
PR9fyOVqAaCXc7LbRGE2chRH3PimjzUJsBsJ6Iwl77oenZAnuf+YDkDL7SLR5BbE+EZ83ljyv
5VtdSrjDlkwtXi/LdSayFIU4rZa6sAo6PcOC0WnOSjiCv7qClJRUtN9/hS4+gcRdZhJyNMeuo
UtKIW7sBDxL/om1xY2b2Gm7vIgCKQcdTsP/3gdVxTxiNNYpMwg4HZja1kGbcvLJOPJE/LXVaI
xGDClpffV2dWJISSP98ONJPehIFJ0ORdP95E2dzY6um32yhRBbHkmguxFytqIZ4AJi61O7ZjU
Jqe3/KGjyCgl+9BbWPQ6gSUaghdiqeFwuasvLCNZWkX/VLdT8Mx+vK1qoZtvd9uCcM89HqSwj
vGIZ6cecQtl9N7P8nOMZ9firZJ91EagqYbeLNQ/eTiQYQGu1k3bE8ZiHjyLU1IinpBhz4XD8q
1ag0RsINdR1un/KgYeRdthxJO68B/rkNEwFRbFKvEKIoSsUDhIOhcg6/XyCDfVo9Hp0tniCHU
Z9FZ0ey5gJJO83m4jfh8Zoovn7L1F07X2CGi2Ff83Bv2AuYSDBHIfxujsJtk3hVrUabBMmU3r
TFdinb0/Y0Ur5I/cw8uH23QFCTfWkHXos/u3KaZ3zA/Hb74IxO49QU32sj2PFcvxVFeRecCVE
IvirKqh+6SlMO+4WS6CjMeswddjmsz8N9rI+IcTQIQl0N6Ij0ENj+k1VWSlJHUaglZRUVK+XB
K2WZTICLcRWw+fx8H8vPcMOefk0PXwnyg67kDf7KB7aY18CFWtIyc1nxeX/IdjYAIC5aAQFl9
/IsvNOwrNyGS0/fYtrwV+x62UcdxrWGTtgyi0gEgxgHjYSfWIKxeccD0D9/94j/4qbqHrhcYK
NDSTvcxC5512JOa8Ac4dRKyHE0GfS6fBUlVN61w3tjVotI+5/uv3QnkDKQYdTdveNsbbs/1yE
Pjk1dmxorEODiv2ORwlptRiW/oP/vdfRzNgh2iEYou7/PiD3gqvwrVqB1jqKxN33wTl/Lom7z
ARAYzbT8NmHJO62F1knn42/voaGzz4k75Lr2u8zZjz1T96Ps8POAonnX4nBIiO8QojBJwl0N0
JOx5AZga5ZvYppu+0ZO1YUDZq8QhJbm2UKtxBbgXA4TGXpChqqKklPTCJcspSc/1yEr3IN/rp
qqi45k5RDjqL+r99iyTOAt7QE9/IlFF53J8GGOrJOOw9/TSXuJQtJ2GE3FJOJpo/fJVBXQ9oR
x+NZUUzY42HkIy8QbIiOBFnGTCD1kKOJeL0YMjLRmmTfeSE2S6EQDR+/17ktHMa9eCEcdET0s
LWJNQ/e0alL5dMPY99259ixNjEZ7QlnESxdjsbvw5dbQPwOu2II+ABQtBpUr4eyu2/AkJ5J2O
Mh7Gyl4Nr262r0BjKPPZVVt11NqLkJXWIShdfdiUbfYYQ3zoL9ursIffoBOFpR9tgX/dgJmCx
DY3BDCLF1kwS6G2GnY0h8UYxEVGrL15CUkdmpXZOTj6Wmgub6uvWcKYTYEridDj556Vmev/Va
goEAwydM5qIrr0NdthjLDrtQds2FqAE/ensirQv/7nK+b9VK/JXlOP6cA4pCwdW3knLA4TR+8
X9otBqS9z0IrS2emjdfIHGn3Sm9/hJCrc2Mf/sz4teOKAkhNn9aDYrB2LW5Q8HUsMfdqeI2EF
324Wrf51i1WPHfcQ3BqopoG6Jgu+UBImMnRV/X6ck8/gxcC/8m0LbMzFQ4rL1adts5pTdeFlt
bHWpuovTGyxjz4vuxLpqFfxFqaiJy8LGgUVCaGnA9eg/q9O3AavtXb4UQQvxbso1VN6J7QA9+
At1YW43RbMa0TjVHTVYu+qoKWhvq13OmEGJLULJgHk9dfznBQACAFf/M5/sffgBVJdDUiH/NK
gDqP3qbpD3363K+bfp2OP/+I3qgqtS+/QqauDhskybT8MXHOP6YQ9jZir+slOUXnU6oNVrop+
NUbyHEFiCiknXqOZ2aNCYz9unbxY61Fiv6dQpxaS1WdPaE2HF4VUl78gygqjhffhp/a2P02OM
m0NpM0U33knv+FeRefC15F12Dd/Wq2CmBmupOhckg+r0rUFMVO44bOQbPy0/hu/Z8fFefh/fe
m7BP2w5dYjJCCDHYZAS6GyGnY0gk0FWlK0jJyu7SrqSmQ2MdBAP4vd7oFldCiC1OZemKLm07b
rstra89i9VqI27bnTAnpWAeNgLziDGkzD6Shv+9h6LTkXnyf3AtmIcaCsXODTbW0/r9V6iRCO
mHHkugqYHWeX/g+PPXTvfQJ6Wue1shxGZM0WlpmfMDBVfdimvJP2gtFkx5hXiWLyNhh12jfYx
Gcs+/kqoXHsdXVoohM5vs089H02FGnsbvx5RXSPJ+s9EYDLgWL8C1cB6atiJiGnMcWpMRnTWe
sNuFxmhEE2fB0GH025CWgWIwoLb9YRBAMRgwpLfPtov4/WSddi41r79AxOclYZeZGDOzCLscn
RJ6IYQYDJJAdyPkaBkSe/hVrFxO8jrTtyFadVJJSaNI1dFcV0tGfsHAByeE6FfBQACzuXMthv
9cfAWJ9TVo9j8EY3Yu5lkHowYCOOf9QfXLT1N020OkHnosoeYGdLZ4lp5xVKfzUw85BsViJX7
KDPxVFUQ8bqwTp1L1xH2xRNtYUIRt6jYD9pxCiP4X8fmJqCpxo8ehMZtRDEaMWTm0/jkn1kfV

```
GVDy8knccxZao4lI0I+Sk0vEaIr1sU+citLUQPXLTxPxebHP2IHCm+9Dv/azSqOgNVtZfuGp7
Z8p2XkMv+fx2DWMWTnknHs55Y/cBeEwaLXknHs5xg7VtEPNjTR9/RmZJ52Fotfj/PtP6j54k4
xjT+3nd0oIITZOEuhuBOvrMObkDXYYlC8vZtj4Sd2+pknPJM/lobleEmghtkRLfvuFXz77mN0
PPpzvPnyPQ449iZHFi7DucgGuf+ax/LyTY32T9j4A29RtKLnwVPIuvR7n33+StPeBjLj/aSqf
fphgQx3J+x6E6vcRWLOKYF4hq2+7mrDLycT/fsvE97/GvWwx2jgLlglTpMq2EFsYjdVK2r4Hs
fTMY2LrnA0ZWYx48LlYH3dEpbmmBqvRiNZmA4+G5sYmLEnpJLb1UVubqXz2kdg5jj/nYMwrIG
f0xGhDIEDVC493mvnir1yDe/FCErbfJXpcVU7j5x8z/M5Hifj9aIxGql58kvjtdsKUGZ11Z5+
+PWV330Tl0w/FrjPyoefR2eN79dzB5ibcixfgr6nClJOPZdxE2atZCPGvSQLdjUBdNdYJkwc1
BlVVqSgtYbt99+/2dSUtk8zSlTTV1gxwZEKI/hbweNA6W5g+cTLjpkzn4AMOJSc3F9XrJtjSj
KLTk3PuZWiMJhx/zKHpy/8j76JraPnhayI+L83ffk7CLjNRIyHMBUXYJk+n+bsv8VeuQdHp0K
dlxNYgqqqKbcIUrBOmDPJTCyH6TTBI5QtPdCoSFqipwjXvDxK23REA1eMiORREP34SgZpqjNl
5mPw+gh5X7BxfWWmXSzd//RmZp0TXV0fCIYLd7BAScrTEflb0BtIPP46Kx+7Ft2YVprzC6Ehz
h2ne1nGTGP/mJ9R/+Db+mirSDz+O+G136tUjh9wuyh+9h+qXnoy15V16HdlnXoRGr+/VtYQQo
iNJoLsRqK9Dl5C48Y79qKm2BkVRsNi6/2urJiOL5GCAxrYql0KIzYsaiRB2OdHGWVB07R/FgY
Y6Kp5/DOerzzL11oeI1NeSk5GJb8Uy0Gjwl5dR+dSDsf7pR52EdeJUIqEgAJq2L6Ge4iXYt92
Jxs8/7nRfXXxCLHmO32FXzIXD+/tRhRCDLOLzEqgq79Lur24vCGY1x9FaV03p9RfH2jKOO43k
g4+OHesSkrpcwzx8JBpj9HNHa40n9bBjqXj07k59rJOmtx8oUP7o3YRaokULfWtWUf7o3Yx56
YNO59gmTcM2aVovnrIz78rlnZJngDUP3UnSXvtjGTl2k68rhBBShbsbwYa6bv+RGEhly5eSkV
uAoijdvq6kZmDxe2murOj2dSHE0OUtLWH1ndez4JDdKb3lSjzLl8Zea/7+a1q+/YLCm+5DURT
Mmdm0/PQtpTdcSrCuhspnHu50rdp3XiFpr/1Rw2GSZu6He9kiIPrl05iTh3n4qE79c867An9l
OflX3cyw2x9CH5/Q788rhBhcSpyF5FmHdGm3T9++vY/fS+WTD3R6veb151E7jEBrrTbsM9rP0
VqspB58FJG2gmD6hATid96drDMvQGuzY8zJZ8R9T6HpMPU6UFsdS57XCrU0E6ip/HcPuY6w09
FNY5iwy9W1XQghekFGoNcR9nmJ+LxoB3mfwVVLFpOak7ve1xW9nqDFhrd4yQBGJYT4t4LNTSy
/7D+45s8FoGbVSlp++Z4Jb31K2O8nEgxQdOejEAgQam0m5HJQ1bbmUA2HIRLpfEFVxVw4nEBj
A97lS2n84n+kH3MKhpxcFp8wm8xjTyXz5P8QdjmxTpiCddI0Mk84A0Ujfz8VYmuhhELYt9mBj
JPOov6919FarGSdcQHaxPbBgrDb3Wntcqy9QyKqMZsx5uaTu+NuEA6jRiKEHK1o7dF1xaGmRq
pfeIKMk84iceYsFI1CyOHAMecHEtsSb53FBlpttIDYWlotuvXMuNtUpvwidIlJhJqbYm3GvAK
Mufl9eh8hxNZHEuh1BOtr0SUmr3fkd6CULl7AtnvN2mCfUFIKlK/aYB8hxNDiKyuNJc9r2bfd
GXfJUpq+/IRAQx3+yjUk7LwHodZm1GCInHMvo/rlpwk7HRjSMwl0WLqhT0kj5HISN2IU+uRkU
g8/Fn1CElUvPYlt8gzs2+1E/HY7o7NYB/pRhRBDhaIQam7ENnEa1jETon+Eb22BtqUfABqLBW
NOPv6KslibLiERbYeiWxq9Efv0HWj+/kuCjfUk7LQ7lrETCbe2Qna0pkLyPgey5Jj2+i26+ER
GPvZi7NhUNIzs086l8pn2YmTZp52LqaCoTx/ZlJPH2OffpfS2q3D9PZf47Xeh4JrbMaam9+l9
hBBbH0mg1xGoq0U/yNO3vW4PDVWVpG+kErgmI4u4hfMGKCohRF9Q9IZOx8Pufhyt1YZr3p80/
N9/yTzxDCxjJ7LyuovxrVwOgNaeQP7lN7H6ruvJv+wG6j96B9fCeVgmTiX7tHPRJCSx5MSDGf
nwCwQaGyg+50Rsk6ejxFkwpKRK8izEVk5VVSIeD6tuv5awsxUAc9EIci+6OtZH0ejJv/wGql9
5Fudfv2EZN5GsMy4AQ/tnViToRxMXR+Ie+6KggFZLsLkBY050VFdjNFHVITEGCLU2417yD4k7
7g6AKTOX5AMOw5CVS7C+Fn1qOrap22DKzOnz57ZNns64Fz8g1NqCPjERrWVwZxcKIbYMkkCvI
1BXM+gFxFYtWUh6bj5a3Yb/z2PIKyDx958HKCohRF8wFw0n7cgTqXvnFeJ32RNFp0VjsaC12s
g+8wLQaIj4faTufwiOP3+l9dcfCTtaaP3jF8zDR1Lx7COMfOBZWud8j6dkGSWXnkX22ZeQe/G
1VL34RLRSrari/PtPAOoKhmHrWMBHCLH1UVUav/y/WPIM0VoMvoo17X004Jg/l5QDDiX96BOJ
+Py0/PQdaYcdG+sScbsouej0TpdOO/w4LOMmR2/j9xP2uLvcPuzuvO7YNn4y5vwiQs1N6BKT+
nVrKZ3NLltXCSH6lCTQ6wjW16Ib5KI6xfPmklU4bKP9THlFqGoEf3MTxsTBHTUXQvSM1hxH3i
XXkrz3LHQpabR89yWKCqtuuZLh9zxO/cfv0/rztwAk7TmL9KNOovbtl/GWLCXvshsIu12U3ng
Z3pK2wmOKgn3adqy69Sq8K5eTuMuene4XaKwf6EcUQgw14TC+VSu6NAc7LAdRQ0FMWTmUP3wn
oZZmtDY7OedcihoMxPr4K7tW8m76+tPYNlbG7BzSjzyBsntvbu+g1WKbMqPLeZLYCiE2V1JFZ
h3+2ppBT6CXzvuD3BGjNtpPp9fTrGio/O7LAYhKCNFXjGkZBJ1OQg0N+KurqHj6IYbf+wS+st
Wx5BmiX0z1yalozHEk7DKTsMeJPjW9PXkGsk47j+bvv8JbWkLWmRfSus6slPQjThiw5xJCDE2
KyUzSPgd2abd03P9dhYrH7otVyA47Hax58I5O/fUpaV2uYczJR2mb5q0oCkl77U/e5TcSN2os
9m12ZNTDL2Cfsk0fPo0QQgwuGYFeR6C2Cn1S8qDdv76qEq/TSWr2+itwd+QwW2j47guKDj164
52FEEOCt2wVq264jLFvfEzyAYdiGTMBfWIyNa8+16WvZ/kSMo4/HeukqUQCAWrfepm8S69HYz
RizMnHkJFF2Okg7bBjMWTn4Pj1R0ItTaAo5Jx9KfZtdhiEJxRCDCWRYADbjO1Jqa6k4X/voTG
ZyTzlbIwZ2e19/D5CrZ23l1ID/k7Tr7UWK+ZR4/AWLwaiO4JkHHsqari9enfc8FGY8gpI2Xc2
GAyYe/h9RgghNheSQK8jUFuNuWjEoN1/wc/fUzh2PJoeVgH3JCbj++v3fo5KCNGXnNUVjHn6D
WpefIakvWdRdu9N6BOTSdhxN1zrFAa0TpmBMSMbrdkSbYhE0CUkEmxqJFhfhym/CPvk9jXOKf
sdHJvGrZXiYUIIQFEjBKorCTY3kXP2JajBIJ7iJZ2+72itVjRxFiId1zBrteg6LhHTaIjfZgd
S95uNGg6h6A14SpcTv/3One6nMRgx92ApmhBCbI6G3BRuRVH2VRSlWFGUFYqiXDXQ9w/U1Qxa
FW5VVfnj688ZPnHKxjuvPSctC6WhjmBTYz9GJoToS3HJKZTddzOq30v5g7cT8bjxV67BkJWNu
XB4rJ918nSsk6bjWbGUksvOYuW1F5FywKEEmxrxrVpB0NlK3PCuyz20Fqskz0KIGEVvoOXn72
```

n98WsqHr+PymcepvnrTwl1qJGgsSdSeP1dKHp9tEGrpeDqW9F02J85EgxiSM+k4pmHKX/0Hlr
//BVzXpGsZRZCbFWG1Ai0oiha4HFgL6AC+FNRlI9VVV0yEPdXQyH8a1ZjyMwaiNt1sXzBPCKR
CJn5hT0+x56SgtNio/XXH0jZ/9B+jE4I0RdcK4vxLF6Ic94fxJ+zCw2f/jf2Wvmj95B+5Ilkn
XURgZoq7NvvjEZvwFw4nLxLrsOUX0jY40YXn0jqocdgmzQNzdovu0IIsR6RgB9P8aIu7f7Kit
jPqgbiRo5l1BOvEqyrRZ+ShjY1BYymWB/L8JFUPHo3mcefjmIw4Fo4D0WvR5+UMiDPIYQQQ8F
QG4HeBlihqmqpqqoB4C1g9kDd3LtqBfrkFLTmuIG6ZUwkovLpy88xZefdUXo4fRsgPjmFyohK
3Qdv9WN0Qoi+Eqwsx7uiGMVgxLnwL+K36zD1MRym9s0XURQF+/Tt0CWlohhNWMZOInGv/bGMH
k/yXgeQdeIZJO60u4z6CCF6RGM0krTHvl3aLeMmxX42p2USdDkwZOVgHjEaQ1Y2EY8bQ4fZLJ
bR4xl5/zOgKHhLS8g4/gxS9jt4IB5BCCGGjCE1Ag1kAx33SKgAth2om7uXLsKUXzRQt+vkm3d
fJxwKMWLytF6dl5iWzlctzUyY+xu+yjWYsvP6KUIhRF9Qg0EaP/+YjONOpfqlpyi48haCzU14
li1CYzKTe/E16DOyWXz8QYx68jVSuqmcK4QQvREJhkjYbW/cxUto/fk7FJ2OtKNOxJjVXkRMb
7NjKRyOe9kiwm4XGlMc5pGjMWVkdrqWdfwkrOMnrXsLIYTYagy1BLpHFEU5EzgTIC+v7xJG15
IFGHMGNgGNRFS+fuc15nz6MQefcW6Pi4etZbZYiSgazNO2peb1Fyi44qb+CVSIrVRff94Yc/J
Rw2E8y5eSd+n1BFuaybv0OhRFQ8TvQw1HWHrqYWSdcQH26dv96/sJITYf/fX9Ji47l9bvvyTr
tHNJP/okFJ0OwiqhDhW2AUw5eZgG+HuQEEJsbobaFO5KoON+BzltbZ2oqvqMqqrTVVWdnpqa2
mc3dy9agCmv5+uP/y1HczNPX385C37+gYPPPBfrJu4/nZKVg7toBLVvvoS7eECWiwux1ejrzx
vLqLEMv/sxFL2eikfvwbXob0LNjTjmzsGYk4d52HCmfDqH/Euvx5Dcd59vQoihr7++3ygaDdb
JM3D+9Turbryc1bddS9jZinnEmD67hxBCbC2G2gj0n8AIRVEKiSbORwPHDtTNPcVLSD/6pAG5
V/mK5Tx/y7WMmDSVPY44Fq1m0/+WkZqVQ1l1NdsfdSLF557I+Df+D0NaRh9GK4ToS/Hb7Ig+P
ZOwx41Gq0OXlkF6QuJghyWE2ILZJ0zGmF9E8v6Homi1mPMK0BiMgx2WEEJsdoZUAq2qakhRlP
OALwAt8IKqqosH4t6+yjVEggH0AzDis+CXn3jnsfvY5aDDGDZu4r++XmZBEYt//4X9jj+FYEs
T8w/chaIb7yZ539ko/yIxF0L0n7hBqrcghNh6Ge12jPaxgx2GEEJs1oZUAg2gquqnwKcDfd+6
998kfrude1UBe0Pqq6tYuXA+kUiYxLR0EpJTcTta+e2L/2PFPwuYdcJppPfROqOsgiK+fOsVP
C4XaQcfRdyIMax56E7WPHwXOWdfQsr+h8pWN0IIIYQQQgjxLw25BHowqJEIde++Rs7ZF//raz
XX1/G/F56meP5c8keOQaPV4mxpxuN0YDSZyB0xmiPPvxRDh30V/y29wUDBqLH89d1X7HLQoVj
HTcRy8324Fs6j6oUnKLv3FrJPP4+0w45BZ0/os/sKIYQQQgghxNZEEmig+fuvUPR6TIXDe9Tf
63az6NefWTrvT5rratAZDMQnJuN2OigrXsK4bXbguEuuwWAcuLVFE3fcmS/feJXpe+xFnNWGo
ijYJk3DNmkanhXFNH7+MWUP3IZlzATMhcNRtFpCrc0EmxpRA340JjOmvEJsk6djn7EDpsJhnU
bjVVUl1NSIv6qckNOBotOjT0rGmJ07KPtmCyGEEEIIIcRAU1RVHewY/pXp06erc+fO3eTzPSu
K+eeo/cj5z8VYJ0zuto+qqjTX17Ny0Xz+mfMzyxfMI6doOHmjxpCQnEIwGMTrcqI3GMkuGo4p
bnASyjmf/Y+G6kqOu+xa0nNyu7we9rjxlCwjWF+LqqpoLVa0VhsavYGI30egthrvqhW4ly4i4
vdhLhyOxhxH2NGKr3w1qCqGtAw0cRaIhAk5WgnU1WLMyMI6aSq2SdMxjxiFISUNNNroljyBAI
pOhy4hEWNmDpqN/FFBVVXUYBBFr++z6fRC9NBG/x/u337eCCFEG/m8EUIMFPlC3ce2uhHoYFM
jpTddjrt4Md6SZdHGvCK+ePZxImqEcChE0O/H53ET8Pu6nJ+Yms7M8RPQG/RQW0mkthItYG17
vaFsxYA9y7pyVaCliffOPzXWZoyLw2A0odXqUBSIhMOEQyFUQFE0aHU6dHo9Wq02us1FfAJTD
zgMjd+Hv7qSSMCPMTsX25QZaG12WDepDYfwV1fiWVFM01efEvF5ex6wVgvhcI+7K3oDik6HGo
lAJAyq2haPEv1fNYIaDPbgOno05jg0BiOK3oBGr4v+r8GIYjSi0RtAq40m8Gv/gx4l9KqqRuN
SI6jhCGooSCTgRw0EiQQD0bg7nxB9nu7i1GhAq0OjN6AY9NH4dHoUrQYUDShKv/6RIfYsHeJU
gwEigQBqMIgaDkEkAhoNik6PxmCI/uFDp4/Gvja2TYyz+/ey7d6hYPS1TveO/v/H2nunHnQE6
Uee0IfviBBCCCGE2Npt9iPQiqLUA2U97T/KoDE9nWUZq2v7Rr/AF3IEVFVv0GDu2ltFVZVIBM
IqbFZvlBZ0irIp+3yruMNKq6rS88y2pzEpKGk6jTFFqzFYNeg0ikJEVXFFCLVEIsHWsBp0RdR
wREVVFLBoFF2iRtHHaxW9VaPotD1MwsKqSkAlElSJhFDViIqqVVD0iqIxKWh0MrS9VfjJHWy6
us67qhenNKiquu+GOvT282YjUoCGPrrWULIlPteW+Ezw/+zddXRbRxbA4d8Tg2WZGRM7zNQ2K
TPjlpmZmXHLtOUm5W7bLTMzN02ahskxxXbMbIult39Ike3aASeWIbnfOTn2m0f3abeyrmbmzr
b5XEPlmSL5fjNUXoP1hlK8EmtkDKVYYWjFmwCs3NT7jeidIZ9A9zVFUearqjptoOPoK9vS82x
LzwLb1vNsS8/SX7bV12xbfK5t8Zlg23yubfGZemuovQZDKV6JNTKGUqwwtOIdSrEOJbJIsBBC
CCGEEEIIsRkkgRZCCCGEEIITaDJNDdzR7oAPrYtvQ829KzwLb1PNvSs/SXbfU12xafa1t8J
tg2n2tbfKbeGmqvwVCKV2KNjKEUKwyteIdSrEOGzIEWQgghhBBCCCE2g/RACyGEEEIIYQQm0
ESaCGEEEIIIYQQYjPoBjqArbX//vurX3zxxUCHIYQY+ja5Pri83wgh+oi83wgh+ssm329E7wz
5Hui6uqGyjrkQYqiT9xshRH+R9xshhBichnwCLYQQQgghhBBCiUQgghhBBCiM0gCbQQ
QgghhBBCCCUEUKWqKs6ClTiLC9Da7FhGjcUQlzDQYQkhhBBCiAHgdzlxrFqOu6IMY2o65hFj0FmtAx2W+AdJoIUYIC1zf2HZaUehetwAxO51AHn//g+GpOQBjk
wIIYQQQvQn1eej5u3/UnTrVeG27GvvIO3089AYjAMYmfgnGcItxADwNjVSePu14eQZoPHbz2l
btnDgghJCCCGEEAPCWbyG4ruu79JW+sBtOAsLBigisSGSQAsxAPztbbgKV3Vr99bVDEA0YrBS
VRVPbfVAhyGEEEKICPM2NaB6vV0bAwG8DfUDE5DYIEmghRgA+oQk4vY7pFu7OTd/AKIRg5Vj5
VL+3ncHAh7PQIcihBBCiAgypmWij+9aC0drs2PKzBqgiMSGSAItxADQGo1kXXYD9lm7B7dtdv
LufxLr2AkDG5gYVJxFBfiaG2n6+buBDkUIIYQQEWRKz2TUM69jyhkGgDEjm9HPvo4pK3eAIxP
/JEXEhBggluEjGP3Mf3Gvq0BjtmDKkG8YRVeu0mK00XZqP3yTuL32H+hwhBBCCBFB0VN3YPxb

X+Ktr0Mfl4AhMWmgQxI9kARaiAGktdqw5I8a6DDEIOUoWkP8/odS/9kH+F1OtCbzQIckhBBCi
AgyJCRhSJDEeTCTIdxCCDFIuUoLseSPRhcTh7usdKDDEUIIIYTY7kkCLYQQg5RrbTGG5BT0cf
F4qtYNdDhCCCGEENs9SaCFEGIQ8jsd+Jqb0ccloIuNw11dOdAhCSGEEEJs9ySBFkKIQci1tgR
jSiqKRoMuJhZPtfRACyGEEEIMNEmghRBiEHKVFqFPTgNAHxOHu1ISaCGEEEKIgSYJtBBCDELu
deXo4+IB0MXG46msGOCIhBBCCCGEJNBCCDEI+dta0ZotAMEiYjIHWgghhBBiwEkCLYQQg5Cvt
RmNObjusy42Dk+NJNBCCCGEEAMtogm0oiiZiqJ8ryjKckVRlimKcmmoPU5RlK8VRSkI/YwNtS
uKojymKMoaRVEWK4oyJZLxCSHEYOVvaenogbbH4m1sRPX5BjgqIYQQQojtW6R7oH3AlaqqjgF
2BC5UFGUMcB3wraqq+cC3oW2AA4D80L9zgKcjHJ8QQgxKvrYWNKEEWtHp0NnteOpqBjgqIYQQ
QojtW0QTaFVVK1VVXRD6vRVYAaQDhwEvhw57GTg89PthwCtq0B9AjKIoqZGMUQghBiN/awsak
zm8rY9LkHnQQgghhBADrN/mQCuKkgNMBuYCyaqqrv8kWAUkh35PB8o6nVYeahNCiO2Kv60Vrc
US3tbFxuOpkqWshBBCCCEGkq4/bqIoShTwLnCZqqotiqKE96mqqiqKovbyeucQHOJNVlZWX4Y
qhNgM3qZGXCWFKHo95pzhaK1RAx1SxAzU+42/rTU8hBtAF23HW1/bb/cXQvQ/+XwzOHlqa3Ct
LUZrjcI8LB+NwTDQIQkhBlDEe6AVRdETTJ5fU1X1vVBz9fqh2aGf6yf2VQCZnU7PCLV1oarqb
FVVp6mqOi0xMTFywQshunEWr2HFWcey+Mi9WHTIrhTeehXubXho8UC93/wzgdZG2fA21vfb/Y
UQ/U8+3ww+bSuWsvjofVhy9L4sPHhnyp58EG9z00CHJYQYQJGuwq0AzwMrVFV9uNOuj4BTQ7+
fCnzYqf2UUDXuHYHmTkO9hRADTFVVqt95jdYFc8Ntte+9QcvcXwYwqm2Tv70tXIUbQBdlw1tf
N4ARCSHE9sXvaKf0/ltxry0JNgQClD9+H+3LFg1oXEKIgRXpHuhZwMnAnoqiLAz9OxC4F9hHU
ZQCYO/QNsBnQBGwBpgDXBDh+IQQvRBwtNP47efd2lvm/zEA0Wy7VFXF397WtQfaFi0JtBBC9C
NfUyPNv/3Yrd1VVjoA0QghBouIzoFWVfUXQNnA7r16OF4FLoxkTEKILacxW4jZeU8cq1d0aY+
aOHWAIto2qR43KAoavT7cprNF09YgCbQQQvQXbbQd25Qduo2yMqZlDFBEQojBoN+qcAshhj5F
oyH5uFMw540Mt8Xuvi/2HXcZwKi2Pb7WVrQWa5c2rS0aX1PDAEUkhBDbH12UjZwb7kKf0DEfP
eWUc4kaO3EAoxJCDLR+qcIthNh2WPJGMfa1j3EVFQSrcA8fgd4eO9BhbVP87a1oekqgGyWBFk
KI/mQbP5kJ73+Pq7QIbZQN8/AR6LbhlSeEEJsmCbQQoteMickYE5M3faDYIv621i4FxCA4hNv
b1DhAEQkhxPbLlJ6JKT1z0wcKIbYLMoRbCCEGGX9bKxpL1wRaY7agetwE3O4BikoIIYQQQkgC
LYQQg0xPPdCKoqCNtuOVedBCCCGEEANGEmghhBhkfK2taEyWbu26aDu+hvoBiEgIIYQQQoAk0
EIIMej421rQmMzd2rU2O95GSaCFEEIIIQaKJNBCCDHI+Nta0ZiM3dp1UTZ8kkALIYQQQgwYSa
CFEGKQCQ7h7qEHOioarwzhFkIIIYQYMJJACyHEIONvbe5WRAxAGxWFV9aCFkIIIYQYMJJACyH
EIONvbUHTYwJtw1tfOwARCSGEEEIIkARaCCEGHV9bKxqTqVu7zhaNt6FuACISQgghhBAgCbQQ
Qgw6AacDjbF7Aq21RskyVkIIIYQQA0g30AEIIcTmUv1+2pYspH35YjQWC7aJUzHn5g10WH0u4
HahGAzd2rW2aLxNjQMQkRBiqFMDAdqXLaJt6SI0JhNRE6ZiGZ4/0GEJIcSQIwm0EGLIaP7zV5
adcjj4/QAYUtIY++pH29yHwIDTicbQfRkrbZQNnyTQQogt0DL/d5adfBiq1wuAPiGRca99giV
/1ABHJoQQQ4sM4RZCDAl+Rztr/3NPOHkG8FSto3X+bwMYVWQEXD0n0LqoaPwtTf0fkBBiSPO7
XZQ/9XA4eQbw1tXS9PuPAxiVEEIMTZJACyGGhIDbjadyXbd2T922V1Qr4HKiGLsn0BqLBb/LS
aDTh2AhhNgU1ePBva6sW7ununoAohFCiKFNEmghxJCgj40j9eSzu7VHz9hpAKKJrIDbjaaHOd
CKRoNOhnELIXpJZ4sm9ZRzurXH7Lx7/wcjhBBDnMyBFkIMGQmHHEXA7aLypafR2WPJvuY2oiZ
MGeiw+tyGhnADaG12fE0NGBKT+jkqIcRQFr/fIfgdDtY99zham43sq27FNmnaQIclhBBDjiTQ
Qoghw5icSuaFV5F89EkoBiP6mNiBDikiAm5Xj0O4IVhIzNvY0M8RCSGGOkNiMhnnXELSEcei6
PToY+MGOiQhhBiSJIEWQgw5hqSUgQ4hYlSfDzUQQNH2/PYcrMQtCbQQYssYEpMHOgQhhBjSZA
60EEIMIn6XE43RhKIoPe7XRdnwSQ+0EEIIIcSAkARaCCEGkYDTiWYDw7cBNNYovM1SREwIIYQ
QYiBIAi2EEINIwB3sgd4QrTUKX0N9P0YkhBBCCCHWkwRaiEFKDQQGOgQxAAJOJ8oGKnAD6Gw2
vJJACyHEoCN/t4XYPkgRMSEGmdaF86l640XcFWWknHAG9pm7o4+JGeiwRD8JuDY+hFsbZcNZU
tSPEQkhhNgYR+Fq6j56h6bffyT+gMOI3+dgTBlZAx2WECJCJIEWYhBpW7aIpccfRMDtAqD5tx
/Ju/9Jkv910gBHJvqL3+lEYzBscL82KlqqcAshxCDhqa5i5fkn4VyzCoDW+X/Q+tdc8u97Cq3
VOsDRCSEiQYZwCzGItP49L5w8r1f+xIOy7u92JOBybHQItzYqSqpwCyHEIOFYszKcPK9X/9kH
ONcWD1BEQohIkwRaiEFE0fTwn6RWAxtY0khsewIu10Z7oHW2aLxNUoVbCCEGhZ7+bivKBpciF
EIMfZJACzGI2CbPQGuN6tKWecn16GNiBygi0d82VURMGxWNr7kJVVX7MSohhBA9MeeNxDp2Qp
e2pKOOx5SdO0ARCSEiTeZAC9FPvM2NaPQGtJYNz4myjh7HuDc+pfaTd/GsW0fi4cdgnzGzH6M
UAy3gcqLRb7gHWmMwoDEY8Le2oIu292NkQggh/smYmMzIx16i4bvPaZn3O3F77k/MLnuhNVsG
OrQNUlUVX1MjGosF7UaWTRRC9EwSaCEizFNbTd0n71H5ymz0SclkXXId9h12RtH1/J9f1LhJR
I2b1L9BikHD73KibGQIN4DOHoO3sV4SaCGEGATMucNJP/Mi0s+8aKBD2SRXWSnVb79K7ftvYh
45hswLryZ68rSBDkuIIUWGcAsRYbUfvk3xndfhKi2idd7vLDvtSFqXLhzosMQgtakeaABdtB2
frAUthBCiFwIeN2VP3E/5Ew/grlhL03dfsOzkQ3H8owiaEGLjIppAK4rygqIoNYqiLO3Udpui
KBWKoiwM/Tuw077rFUVZoyjKKkVR9otkbEL0B299LeteeLJro99P28L5AxOQGPSCc6A3nkBrb
dF4JYEWQgjRC+515dS8+3qXtoCjHUfBigGKSIihKdI90C8B+/fQ/oiqqpNC/z4DUBRlDHAcMD
Z0zlOKomgjHJ8QkaU3oLN3LwD2z0JhQqzndzk2WoUbQBtlw9soCbQQQojNp+j1PdZh0ZjMAxC
NEENXRBNoVVV/AjZ3wdLDgP+pqupWVbUYWAPMiFhwQvQDfbSd7Ktu6dqWkIRtivxfW/Qs4HCg
2UgVbgCt1YZPEmghhBC9YErPIuvKm7u0WUaPwzJq3ABFJMTQNFBFxC5SFOUUYD5wpaqqjUA68
EenY8pDbUIMaTG77MG4Nz+n5c/f0MXGYZ8xC8vwEQMdlhikAk4nutiNL1ums9nw1Nf2U0RCCC

```
G2FUlHHo95WB6tf83FlJWLbdpOmFLl47YQvTEQCfTTwJ2AGvr5EHBGby6gKMo5wDkAWVlZfR2
fEH1KYzBinz4T+3RZjmoo6u/3G7/LgcGQstFjtLZovHV1EY9FCNG/5PONiDSdLZrYXfYidpe9
BjoUIYasfq/CrapqtaqqflVVA8AcOoZpVwCZnQ7NCLX1dI3ZqqpOU1V1WmJiYmQDFkJs1/r7/
SZYRGzjQ7h1tmh8DZJAC7Gtkc83Qggx+PV7Aq0oSmqnzSOA9RW6PwKOUxTFqChKLpAP/Nnf8Q
khxEAKOB1ojJuYA22LliJiQgghhBADIKJDuBVFeQPYHUhQFKUcuBXYXVGUSQSHcJcA5wKoqrp
MUZS3gOWAD7hQVVV/JOMTQojBJuB2bbIKt85mx9e4ufUZhRBCCCFEX4loAq2q6vE9ND+/keP/
Dfw7chEJIcTg5t+MIdzBHmhJoIUQQggh+lu/D+EWQgixYapr0z3Q2qgo/I42VJ+vn6ISQgghh
BAgCbQQQgwqfpcTjcG00WMUjRat1Ya3qbGfohJCCCGEECAJtBBCDCoBtwtlEz3QADq7Ha+sBS
2EEEII0a8kgRZCiEFE3YwiYgC6mDi8dTX9EJEQQgghhFhPEmghhBhEgj3QGy8iBqCzx+Ctkx5
oIYQQQoj+JAm0EEIMEqrfj+r3o+g2vUCCzhaNR3qghRBCCCH6lSTQQggxSKzvfVYUZZPH6qLt
eGqr+iEqIYQQQgixniTQQggxSARcLjSbMXwbQkO4a6ojHJEQQgghhOhMEmghhBgkAi4nGuPmJ
tCxeGolgRZCCCGE6E+SQAshxCARcLs3awkrkCJiQgghhBADQRJoIYQYJAIuZy+GcMfibZAEWg
ghhBCiP0kCLYQQg0TA40bR6zfrWK3djrehATUQiHBUQgghhBBiPUmghRBikOhND7RGp0drseB
raoxwVEIIIYQQYj1JoIUQYpAIuFybPQcaQB8bh1fWghZCCCGE6DeSQAshxCARcLvQbOYQbgCt
PRaPJNBCCCGEEP1G15uDFUVJBqaHNv9UVVU+uQkhRB8J9kBv3hBuCFXirpW3YSGEEEKI/rLZP
dCKohwD/AkcDRwDzFUU5V+RCkwIIbY3AZcTjX7zh3DromPw1FZFMCIhhBBCCNFZb3qgbwSmr+
91VhQlEfgGeCcSgQkhxPYm4Hah6DZ/CLc+NhZ3ZUUEIxJCCCGEEJ31Zg605h9Dtut7eb4QQoi
NCLhdm72MFYAuNh73uvIIRiSEEEIIITrrTQ/0F4qifAm8Edo+Fvis70MSYus5i9fQMu933NWV
RE/bkaiJU9FZrAMdlhAb1dsEWh8Xj6dqXQQjEkKIwcnvdtG2aAEt835DH5dA9IyZWIaPGOiwh
BDbgc1OoFVVvVpRlKOAWaGm2aqqvh+ZsITYcs61JSw7/Sjca0vCbSP+8zyJh8iUfTG4BZy9q8
Ktj0vAUyNzoIUQ25+mn75l5bknhLcNyamMe+0TzMPyBjAqIcT2oFdVuFVVfRd4N0KxCLHZXOV
rCbhdGFPT0f6jZ7l92cIuyTNAyT03Y99pVwwJSf0YpRC943c50PSmCndsPN66GtRAAEUjM2qE
ENsHb3Mjpffd2qXNU11J66K/BiyB9tRW42tqRJ+YjD4mdkBiEEL0j95U4T5SUZQCRVGaFUVpU
RSlVVGUlkgGJ8Q/+RztVL/1KgsP2pm/95nOqkvPxFm8psssxAaez+3ktzQQ8nv4KU4gtEnD1bg
i3Rq9Ha7Hira+LYFRCCDG4qB4Pvpambu1+R1v/x6KqNP3yPYsO34O/99uBZSceTOuSv/s9DiF
E/+lNl8X9wKGqqtpVVY1WVdWmqmp0pAITtoiftSxey5rqL8Lc2A9D47eeUP/0IAa83fIxl1Fi0
tmhQlHBb2qnnYkxJC2/7HO20LpxP3Wcf0LroL/xOR/89hBAbEHA5e7UONIAuPhFPtcyDFkJsW
9w1VTT+/B31X32Co6igyz5DYjJpp1/Q9QStlqhxk/ovwBBnUQErzjkeT2hFhPYVS1l18Wl46m
o2caYQYqjqzRDualVVV0QsEiE2g7Nwdbe2us/eJ+uy6zGmZeBztONraSHjgqtAUfC3NqMxW0g
64rjwENeAx0P1Gy9S8u8bw9fIufleUk86q1fzT4XoawGXC41h89eBhlAhsepKGIAPjkIIEQmu
irWsvvQsWhfMBUAbZWPsqx9gmzgtfEziUSegGAxUvfoc+pRUsi65bkASaNfaEgKuriPf3GtLc
K8r79W0Mb/LSdviBbSvWIohPpGoiVMxZWb3dbhCiD7QmwR6vqIobwIfAO71jaqqvtfXQQmxIf
oe/hhZ8kaiibIBUP/ZB6y5puNb6ahJUxn11H+79D47i9dQcu8tXa5Res9NxMzcDevIMRGKXIh
NC7icKPpeJtAxcbIWtBBim9I6f244eQbwt7Wy9rH7GfXky2hNZgCMSSmkn3kRSUedgMZgQmux
DEis+rj4bm0aswVdtL1X12n4+lNWX3pmeNs6dgKjn30DY1rGVscoxGCgKEoMcIKqqk9F+D6HA
6tVVV0eqXv0Zgh3NOAA9gUOCf07OBJBCbEhUeMnY5+1e3hbYzSRc8O/0UfbcVdWUHL3jV2Ob1
v4F+0rlnZp8zXWg9/fpU31+fA1NUQsbiE2R8Dl7HUPtC4mFk9VZYQiEkKI/ucqK+nW5lixhEB
79znO+pi4AUueAcx5I0k/77IubcNufwBT9rDNvoanporiO6/v0ta+bDFtyxf3RYhCDBYxwAWb
Omg9JWhLKqQeDkS0R6w3y1idvrH9iqJcr6rqPVsfkhAbZkxJY8TDs2lfuQx/exuWYflYRowGg
mvo+lqau53zz6IixvQsdPZYfM2N4TZdbBzGjKzIBi/EJgTc7t73QMfF415XFqGIhBCi/0VNmN
ytLeHgo9DFdu/tHWg6axQZ519J7B774ampxpSZjWXkGJROdVg2JeB29fglfqC9vS9DFWKg3Qs
MVxRlIfA9MAGIBfTATaqqfqgoSg7wJTAXmAocqCjKKcBJQC1QBvylquqDiqIMB54EEgl28p4N
xAGHArspinITcJSqqoV9/SC9WsZqE44GJIEWEWdITMaQmBze9re10r56BX63i4SDj6Luo7fD+
xSDEUveqC7nmzKzGfXs6xRcfT7ushJM2bnkP/A0pnRJoMXACrh73wOtj0+k9e/5EYpICCH6Xs
DjxlGwEndlBcbUdCz5o7os4WebNIOcm+5m7UN3EXA5id//MFJOPGPQLtens0Vjnz5zi883pKS
T9K+TqP7fS+E2Ra/HnD9qwycJMfRcB4xTVXWSoig6wKKqaouiKAnAH4qifBQ6Lh84VVXVPxRF
mQ4cBUwkmGgvAP4KHTcbOE9V1QJFUXYAnlJVdc/QdT5RVfWdSD1IXybQm/9VmxB9xNfSQtkT9
7PuuccBSL/gSlJOPJO6z97HPCyf7KtvC/dQd2afMZMJ73yNt6EOfXyCrA8tBoWAy4XS2wQ6IU
l6oIUQQ0bA66Xm3dcpvOlyUFVQFIbf9QjJR5+Mogt+LNVFR5N2+gXE7X0gqseDMT0Lrdk8wJF
HjkavJ+P8K9BG2ah59zVM2cPIueY2rKPHDXRoQkSKAtytKMquQABIB9b3jpWqqvpH6PdZwIeq
qroAl6IoHwMoihIFzATe7jTao3fLmGyFvkyg1T68lhCbpX3VsnDyDFDx1EPYZsxk/DtfY0hMR
hcqLtYTQ2IShkRJnMXgEXC70fR2CHd8Ip6aKtRAYND2zgghxHrO4jUU3XZ1MHkGUFWKbrsa27
QdseZ3fOGtKArmrNwBirL/mTKzybnuDtLPugiNxbrRzy9CbANOJDj0eqqqql5FUUoAU2jf5sx
d0ABNqqpOikx4m755X5EeaNHvvLXV3dpa//wN1euVPz5iyAm4e98DrTEY0EZF46mpilBUQgjR
d3wNdaheb5c21evFW183QBENHopGgyEpRT6/iG1VK7D+/9x2oCaUPO8BbGjNtl+BQxRFMYV6n
Q8GUFW1BShWFOVoCBccm9jDfSKiLxPotzd9iBB9y5SVA/8o1GEdMx5DUgoAqqriLC2ibekiPA
31AxChEJtP9fS+BxrAkJSMu0KGcQshBj9DagZaW9clnrQ2e7flmgJeL47C1bStWIKvrbU/QxR
CRICqqvXAr4qiLAUmAdMURVkCnAKs3MA584CPgMXA58ASYH3F4BOBMxVFWQQsAw4Ltf8PuFpR
```

```
lL9Dhcb63CaHcCuK8jgbGZ6tquoloZ9393DuCwS/KahRVXVcqC0OeBPIAUqAY1RVbVSCA9j/A
xxIsJLaaaqqLujl84jtjGXEGEY8PJvCW67E39qCaVg+efc+gT4mFr/LSd1H71B0x7UEHO2YR4
xmxMNziBozfqDDFqJHW9IDDaF50BVlMHWHCEQlhBB9x5ydy6inXmH1Fefgra1Gn5jMiIdndxm
u7W1qpPLlZyh/6iFUrxf7Trsy7M5HsAzLG8DIhRBbS1XVEzbjsH9O/n9QVdXbFEWxAD8RKiKm
qmoxsH8P9/iVCC9jtTk90PMJBmoCpgAFoX+TgE190nuJ7g92HfCtqqr5wLehbYADCFZdywfOA
Z7ejNjEdk5jMJB42DFM/PhnJn70ExPe+oKocZMAcKxcxprrLiLgCE6lcK5eQdGtV+FrbRnAiI
XomaqqwTnQht7XwNDHxeOuWBuBqIQQou/FzNqdiR/+wMSPfmTihz8QM2v3LvtbF86j7D/3hod
6N//+E5Wvzkb1+wcgWiHEAJsdWvpqAfDuYOhg3WQPtKqqLwMoinI+sLOqqr7Q9jPAz5s496fQ
el6dHQbsHvr9ZeAH4NpQ+yuqqqoES5nHKIqSqqpq5WY/jdhumbNyurW51haHf4+aMAXFYKBt4
Xy8tTXobNH9GJ0Qm6b6fKAoKFptr8/VxyfiWlvS90EJIcQWUv1+0Gg2uB6yMSUNY0paj/valy
7q1tbwxUdkXXQ1+vjEPo1TCDG4bWavdb/qzRzoWKBz1hEVauut5E5JcRUdJcvTCS6OvV55qE2
ILWJITMaUlUvuTXejT0hEYzCSfe3taCzb7lIYYugKuJxb1PsMwSHcrvLSPo5ICCF6z9vcRN1n
H7D0lMMpuPJcWhb8iar2bqEWc073aYtRk6ahiZIvv4UQA683y1jdAyxQFOUHghW3dwVu35qbq
6qqKorS6+WvFEU5h+Awb7KysrYmBDHA/O3tuNeVoRhNmDKzN/hN9ZawjBlP5qXXU3D1eRAIAN
D824+YsnIxpsh3M2Lz9Nf7TcDtRmPcsgTakJCEe115H0ckhOhv28Lnm8ZvP6fgqvPC23Wfvc/
4t7/CNn7yZl8jasoMEo86AUNCEopeT/vqFWReeBXaLXyPFEKIvtSbHui9gRcIVkl7D9hJVdWX
tuCe1YqipAKEftaE2iuAzE7HZYTaulFVdbaqqtNUVZ2WmChDeYYqZ3EhKy85nb/324GFB86k8
pXZ+Npa8TkctC1dSPPcX3BX9fh/gc2it8fSvnJpOHleb91zj+N3u7Y2fLGd6K/3m4DbibIFFb
gB9IlJeNaV97qXRwgxuAz1zze+5ibKn3ywS5vq8dA6//eubYEAjsLVNP32E47C1aj/+Duti7J
hyR9F5cvPUv7EAyiAVqZeCSEGid4k0M+Hfu4FPAI8qSjKpVtwz4+AU0O/nwp82Kn9lNA6XjsC
zTL/edsV8HqpeO5xmr7/MrjtaKf49mto/Xseax+6k0WH7sbS4w9i8ZF709bDXKjN1dOQWEVvQ
FH6cgU3IbZewOXa4h5ordmCxmzGW1ez6YOFECJCVBTQ67u1K9qOAY9qIED95x+y6OBdWHbSIS
w6eBfqP/+wSxLdunA+pffeQsDlBKDhq0+oeu2Fbom2EEIMhM3OIlRV/R74N3AzMAeYBpy/sXM
URXkD+B0YqShKuaIoZwL3AvsoilJAsFf73tDhnwFFwJrQ9S/o3aOIocTbUEf9Zx90a29ftpiq
154Pb3uq1lFy363429u36D5xe+3fbVmg9LMvQbMFSwUJEUkB15b3QAMYklOlkJgQYkDp7XayL
rm2S5vGYsU2bcfwtrO4kIKrziMQGgkWcLsouPp8nMWF4WPaFncvslv3ybv4GusjFLkQYrBTFC
UntIb0gNvsOdCKonwLWAkmxD8D01VV3Wh3h6qqx29g1149HKsCF25uPGJo00VFYRk1lpa5v3R
p18fFYR09DkveSNqWLcKxchmt83/H29yI1mrt9X2iJk5l3BufUffp+/jbWkg87BhsU2b01WMI
0We2pgcawJCUgmttMdGyFrQQYgDF7LYPY158h9qP38GQlErCAYcTNWZCeL+3toqA24V17ESso
8bSvnIZ7csW4amtwjI8HwBTZk6361rGTEBjjeqvxxBCiA3qTRGxxcBUgotbNwNNiqL8rqqqMy
KRiSHP29SIt6EOfUwc+rj4Lvu0VhvZV9/KslMOD6/TbN9tH0xZwzAkJNH0249ET9mBhAMOp+X
veehjtqTgOyiKQvTk6URPnr7VzyNEJG1NFW5Yv5RV8aYPFEKICNJZo4jdbR9id9unx/2GpBSy
r7uTtoXzaPr1B6ImTiXhkH9hTEoNH2ObtgO2qTvS+tcfQHD+c9bF16A1ySoaQgwFvw6znwDcD
WQBa4EbZhU1v94Hl9YqijIHmEmwVtZhwEkEiy8aCI5kPllVVYeiKC8BTmAykAScAZwC7ATMVV
X1tC0NYrMTaFVVLwdQFMUGnAa8CKQAUhJRdNO66C8Kb7iE9hVLMeeNJO/ux4juNIQLIHrKDCZ
++APOwtVoTGZ0sfGsPP9EPKFqwnWfvoe1eAL5Dz6D1tL73mchhpKAy7mVPdDJuEqK+jAiIYTo
expbNNVvvYKrqACAhqp1OApWknjEseFjdPZY0s+9FMfKvVG9HoyZ2bL+sxBDRCh5ngNYQk3Zw
Jxfh9npgyQ6HzheVdWzFUV5CzgKeE9V1TkAiqLcBZwJPB46PpZgwnwowXpbs4CzgHmKokxSVX
XhlgTRmyHcFwG7EOyFLiFYkfvnLbmpGFr8ba20r1qOt74WU2YOlvxRKLoN/1/HXbWOleeegKe
mCgDnmlWsOPs4Jn70I6bM7C7HWoaPQBdtp/zph7GMGBNOntdrX744PE9KiG2Z3+nY6jnQLfN+
3/SBQggxgFwlReHkOdxWVICrpAhjYjIQ/BJ+5TldZwGmn38l2Vfd3GW5S2fxGhyFBWitViwjR
mPYgiTbUVKIY/kSAh43lhGjuww3F0JskbvpSJ7Xs4TatzaBLu6U9P4F5ADjQolzDBAFfNnp+I
9DyyYvAapVVV0CoCjKstC5C9kCvRnCbQIeBv5SVdW3JTcTQ4+/rZWyJx+k4tlHgw1aLSOfeJm
E/Q7Z4Dnu8tJw8ryer7kRV1lJtwQaoOWvuRhTM/A1N3a/mKIE/wmxjQs4t3IId1IKrrKSvgtI
CCEiQd1AJe1O7W0L53fbXfvB/0g/8wL0cQkAtP49j2WnHoG/rRWAmN32Je+e/2BMSdvsUNpWL
GHNNRfSviy42ocuLp5RT/8X+/SZm30NIUQ3G1rEvi8Wt3d3+t0PmIGXgMNVVV2kKMppwO49HB
/4x7kBepcHd9GbKtwPqqo6V5Ln7Uv76hUdyTOA30/hDZfgqijb4Dna6JjuPdSKgs4e0+Px7so
KWhfOA42GmN327rIv8bBjCHg9Wxi9EENHwOXsVjG+N/Sxcfiam/E7HX0YlRBC9C1Fpyd+/0O7
tMXvfyjoOpa/MqZldjvPkjcKjTk4ncvvaKP0gdvDyTNA049f9Vi9e2Na5v4aTp4BfA31VL70D
D6nlPcRYius7WX71rIBlYqi6IETI3SPLrY48xbbh57WlfU1NuBrboL07n/gAMy5eWRfezvNv/
+MddQ4HIWrsI4ej3n4iB6Pt+SPpPqNFzEPy8eQlELmpdfhra3BkJRC+6pluMvXwtQdezxXiG3
F1i5jpWi0GJJTcJeVYhkxug8jE0KI3lF9PtzVlWj0BgxJyV326ex2NBYrWZfdgKemCn1SMq61
Jeg7fckePW0HrGMn0L5sMQAas4XMS69Daw4WEfO1ttK2fEm3+7o38uV+T5yFq7u1ta9cir+lE
Z1ZCpYJsYVuoOscaABHqD0SbgbmArWhn7YI3SdMEmixUabMHNBqwe8Pt5nzRmJM3fAQKY1eT/
T0mdR/+QnlTz1I1MSppJ99yQarZ1pGjCF2l71oX74YX0szNe+9gS7aHkzSAwHSz76kj59KiMH
H73Ru9frkhpQ0nCWFkkALIQaMu6KMihefpuq/c9BF28m54d/E7XswulAxUHNOHrG77kXBdReh
NVvwOx3k3/sE5ty88DVMmTmMnv0/2lcsIeByYskb1eV9TR+XQPx+h1Dz9qtd7m0ZOaZXsdqmz
KDqtee7tMXtuT/6xJTePrYQImRWUfPrvw6zQx9X4VZVtYTgalDrtx/stPvpHo4/bSPnnvbP43
```

tDEmixUZb8UYx8/CUKb7gEX1Mj5uEjyH/oWfSx8Rs8x1NdxcoLTg4XBGtb9Bcrzz2eCR/8gKm
HXmtjUgrJJ5xO6cN3Eb/TrgQcDtpXLEFri2bYLfdhGTU2Ys8nxGARcDq2PoFOTMFZUthHEQkh
RO9Vv/s6lS88CYC3rpaCK85h3GufYN9pFwAUrZaEg47EMno83upK9MmpWIblo2i6zio0pqZjT
E3v8R4avZ70cy/FXbGW5t9+RGMyk3XlTUSNn9yrWKOn7UTamRdR+cqzqF4vsXvsS+IRx6HRbP
YMRyFED0LJcl8sWzUoSQItNkrR6UjY/1Cixk/G19yEISUVQ6iAx4a4ykrwtzRjSE3HU1kBgLe
+DldpcY8JNASrcY948BlcZaXE7rEfAbcbnc0W7AEXYjsQcDpQtqKIGIAhJRVnYcGmDxRCiAjw
NNRR/dYr3dpbFs4LJ9AQTKKt+aMgf9QW38syLJ9Rz7yGu3wtGpMZU1ZOtyR8U0yZ2WRfdQsJh
xyF6vVgGjYCQ2zcFsckhNg+SAItNing8eCuLKfpx2/R2mzE7LxHt2UeVJ8PVVXR6PWg1ZJy/O
l4G+sxDx9B43dfBJfX0Wy4mrbq86Ho9Fhl6KnYTvkdjg0W2ttcxpQ06r/+rG8CEkKIXtKazJi
zcrstSWlI6nlItN/tQms0bdG9/E4HbUsX4SxajdYShep1Y8nv+hnCVVkeLBS2dBG2ydOxTd8J
4z9i0RiN2CZM2aIYwvepWBu8z/Il2KbuQPT0nTAkJG3VNYUQg5ck0GKTWv78hWWnHgmqCkB5l
I3x//sc65jxqD4fLQvmsu7Fp/E1NZBx4dWsueYCPFXrwudnXnY9llHjKJ/9H3ytLUSNmRDuiV
Z9Plr++oN1LzyFr6WJ1FPPI2bn3dFFRQ/IswoxUAIuJ5p/FNvpLUNKGq7Soj6KSAghekdrsZJ
xybW0LJiL6gmuoGHKzSN66g5djnMWF1L74Vs0fv9lcNj0Ycdizh3eq3s1//kbbX//SdPP36GP
T8TX0gQ6PZbQXGpvcyNFt1xF47efh89JOvZUcm++F53ln0vUbjlPfR0FV19Ayx8/BxteeJLU0
y8g59rbtmppQiHE4CUJtNgov8vJulfmkHraeWgtVtyVFdR98i5Nv/2Adcx42lYspemX77GOGE
3zn7/R+tcfXZJngOrXXyTtzAupenUOtrETafz+S4bd+gBao5HWRX+x9KRDw0XKWub+ysgnXyb
hgMMH4GmFGDj+PhjCrY9PwNfchN/pQGvuuw+IQgixuTy11eTech+q242i1+NtasTX2hLe722o
Z/WV54TXem5b8jeNP3/HmDlvoo/rqK+i+v24yooJeDyY0rPRWq0d12hupHX+75Q/2VFDqOnn7
zBlZIUTaOea1V2SZ4CaN18m7eSz0Y0Z32fP61yzsiN5Dql8+RmSjz0Z64jeFTUTQgwNkkCLjQ
p4PcTsuAtlTz6Ar7EB87B8cq69HZ/TgaOwgNoP36Lq1dmoPh9xe+6PeVh+t2v4He14qiuBYI9
z7QdvkX7GhVjyRtL449ddKnwDVDz7H2J32xftP74hDni9OAtX462rwZiWiSl3OIqy4WHhQgwl
fVFETNFoMaak4Sopwjp63KZPEEKIPuRtbsRdUUbzL98Hi3sZTSQffxquogJsoQJfzuI1eOvry
Lz4GtRAAEWjoeaDt3AWrwkn0N6mJqpef57yx+8n4HYRu+d+5N50D+acYC+1r7mJmnde63LvgN
uFs2gN7Bna9np6jDHgcffpMwc8PdwnEED1evv0PkKIwUMSaNEj59oSHCuX4nc58TTUYUhJI+3
0Cwi4XQS8Xuw77kb9Fx+GK20CNHz7OeYRozFmZAXXbg5JPPxY6r/+DEWvRxdtB78PQoU+NMbu
PW4aszm8fz2/20XN269RdPvV4PejMVsY+cTLxO2xb4ReASH6V8Dt6vG/h95av5SVJNBCiP6mo
uCtriR62o7BYdtaLd66WlR/IHyMYjSSfPRJlD1xP6rHg2IwkHnRNSid3v9a5v/O2gfvCG83fv
clxowcht1yL4pGg84WjaLv/oWjptPIG0tuHqacYbhKOqa1RE2ZgSlnWJ8+s3l4fpeiqQD2nff
ElJXbp/cRQgwekkCLbtpXr2D5aUeGh2Lr4xMYftejrLzg5PA86OQTz8Tf1trt3MbvvyT/odlU
zHkMV2kRiYcdg7+1BVNGFmmnnUvF80+SdsaF4eraMbvuTfkTDxJwu8LXyDjvcrSmrkVFnGtWU
XTrleH7B5wOCq46l4kf/bTByt5CDCUBp3Orh3ADGJJTcBZJJW4hRP9TfF7Mw0dQcs/NBJwOAC
wjRhM9faeOY3Q6yp98MDxHWvV4KH/yQWL3PjB8TOvCed2u3fDlR2RccAXGpBT0sfFkXHAFhTd
cGt6vjY4havyk8LYhOZXRz7xO5X+fo/m3H4nd+wCSjzkFfUzfVtk2pWUy5vm3qXxlNi1//krc
/oeS/K8T0dmklosQ2ypJoEU39V9+3GUes7e+joZvP8eUlRsuUFT34VtknH85df84N2r8FKxjJ
zLqiZcIuD3obDacxWuwjB5P00/fkHPdHdh33CVYrRuwjZ/MuDc/p/7Lj/A1N5Nw0BHYpszoFp
OnujKcPK/na2zAW18rCbTYJgSczq0ewg1gTM3AsXpFH0QkhBC9pDdS9/mH4eQZwLF6Bb6W5vC
2v6mxy5fmEByB42tqCG8bErsXVDTnjYTQtC1fWyttSxaSfc1ttC1ZiD42DkNaRni62HqWEaMZ
duv9+Nrb0EXZer3M1eayjhrL8DsewudoD/aOy/QysZ3bM0ZzAnA3kAWsBW74rimwVetCK4piB
d4CMgAtcCdwX6jtAMAJnKCq6hpFUQ4BbgIMQD1woqqq1Yqi3AbkAsNCsV0O7Bg6vwI4RFXVTc
6/kARadNO+fHG3NtfaEgzJqeEE2jZpOtaxk7CMHItj1TIA9AlJpJ52bri65frqk+bcPMy5eSQ
d+q8e72ebMGWTS0gYU9ODw7oDHcPA9AlJPf6RFWIoCridaAxbtpxLZ8b0TBp//q4PIhJCiF7y
enCVFHZr9jXUh383JKeiMVu6JNkaixVjcmp425I/iqiJU2lb9BcQ7F1OPubkcO9xoL2d+s8+w
Dp6HDG774u/rZWq/z5H+rmXdbu3otWij7b31RNukKLT9ct9hBjsQsnzHGD9nIpsYM6eMRq2Mo
neH1inqupBAIqi2Akm0M2qqo5XFOUU4FHgYOAXYEdVVVFUc4CrgGuDF1nOLAHMAb4HThKVdV
rFEV5HzgI+GBTgUgCLbpJOPAIGr78uEubfdburJv9HwCyLruB5nm/UXLvzaSfeymKVoc2yoYp
KwfL8BHhc3ytLTiLClADAcy5eehjYrc4JvPwkeTf/xSFN15GwO1CFxPLiEefCybWQmwD/C5Xl
zmAW8qYnomrZE24OI8QQvQXXVw8iYcdQ8Uzj3Rpj5o4Nfy7KWc4I596lda/5oIaAI0G25QdMO
V0LGNlGTGatLMvAb8vOE/aYsU6YnR49Jo+IZHcW++j7qO3Kb3vFrRR0aSecjZRoUJlQogBdTc
dyfN6llD71iTQS4CHFEW5D/hEVdWfQ6M93gjtfwNY/+aTAbypKEoqwV7o4k7X+VxVVa+iKEsI
9mR/0en6OZsTiCTQ2zBH4WqcRavRWqKwjByDISFps86zz9yVzMtuoOLph1HVADk33oMpK5uMC
69Ca7HSvmo5AY8H+067UnD1+eD3o09MJu+exzFl5aLR63FVrKX4jutp+PoTAKJnzCTv3icxb2
HxDo3BQOLhxxI1aRrehjqMqemY0rO26FpCDEYBl7NP1gzVWqxoLFY8lRUYZXqDEKITZ0kRjjU
r0RiMWEaO6dLr2ydUFcvIMcTvfyj1X32C1moj9eSz0JjMXQ9zOVn3wpMEHO1oLFZGjJnQZb+v
vZWmH74KV9o2540k774nO11ApW3ZIqLGTyZq/GQUrQ5nSSEBp7Nvn0cIsSU29AF9qz64q6q6W
lGUKcCBwF2Kony7flfnw0I/HwceVlX1I0VRdgdu63SMO3S9gKIoXlUNzxENsJm5sSTQ26iWBX
+y/NQj8Le3AcEe5Pz7n9pkj23b8iW0LV2IMS2DcW98hjbaTvVbr1Lzv5dwV5aDRsPwOx8levp
MCq44O3yet7aa0vtvxZiRiXXEGJp+/p6Grz/BlD0MRaul5c/fqPv0PTIvvGqLn0nRaLAMy4ce

```
lsoSYqgLuN19MgcawJSehaNwlSTQQoiwtqWLWHbKYfiaGgGwjpvEyCdexpyVEz7G29RI2+IFO
EsKMWVkETVhSrcv352lRbQtXoCvpQXrmPFEjZsU7hn2NdZTev9tGJJTyTjvCgJuJzXvvYHGbM
E+YyYArpJCVl9xTngId8DRzuorzmHSJz9jDq3h3PbXn9S88xqGtAx0UTYcBSupfOkZLKPGoTO
b8dTXYsrMpfTB2zGlZ+JrbsKYnomvrYW+FvB4aFvyN+0rlqCLicM2cSqmzOw+v48Q25C1BIdt
99S+xRRFSQMaVFX9r6IoTcBZoV3HAveGfv4earMTnNMMcOrW3LcnkkBvg/yONkofuD2cPAM0/
/oDrYv+2mgC3bpwPktPOJiAK/gNrtZmZ/Ts19HodRhS07HvtAvR02ay+urzSDvtvG7nO1avwF
sfnOfUumwROTfcRfvyJag+H8nHnkrLovkEvN7wH1ohRFAgtF6oouubt2RDajrONauJ3XXvPrm
eEGJoC3i9VDz3eDh5BmhfupCWub+EE2i/20XFnMeoePrh8DFJR59M7k13hytKO0uLWHbakbhL
Q6MhNRpGP/8WcbvtE9y0RGHJH03rwvkYUzPwt7bgqa3G2GnEmKe6ssv8ZwiurOGurgwn0K6KM
rKvvQNncQH+lmYSjziOlnm/462uRJczDEWnx7F6OZnnX0Hror/QxyVgys6NSA90449fs/K8E8
OFTM0jRjPmubcwZcgoOCE24Aa6zoEGcITat8Z44AFFUQKAFzgfeAeIVRRlMcGe5eNDx94GvK0
oSiPwHcHCYX1GEuhtkK+1NVzYq7POaxT+U8Dnw7FmJcnHn0b9p+/jqanCkjeCmvf+R83brwLQ
CDT+8j2Jhx6Nxti92JE5fxT62GCBj7id92DVxaeh+nwA1H36HiMemSPJsxA9CDgdaExbX0BsP
WNaBu2rlvfZ9YQQQ1vA2U77kr+7tTvWrAz/7ioupOLZR7vsr3n7VVKOPw3bpGkAtC1a0JE8Aw
QClN57K9GTp6OLjkFrNpN29sU4Vq9A9bhRVZWEw/7VZe1lfWIyGqOpSyVujcmMISklvG0dPZ7
Vl51JwNEOQP0XH5F7y30o5uBQcNXvw5icQukDt4fP0drs5D/w1Ba8Ohvmra+j+K4buqwC4ly9
gralCyWBFmIDvmsKvL5njAb6uAq3qqpfAl92bgvNgX5AVdVr/3Hsh8CHPVzjtn9sR21o38ZIh
ZltkD4ugfgDDu/Wbhk5psfj3ZUVlD5wO4U3XU7Nu2+Q9K8Tsc/cjZid96Dm3de6HOtcvQJDUj
JNv/5AyklnhZeU0MXEkn3lLZhC3x43/f5TOHkGQFWp++RdVL+/bx5SiG1IwO3qk/nP65kysnv
8Ek0IsX3SRceQ0MNKGPYZs8K/+52OLitdhNtDSSyAr6Wp235vXTUBVzAZdtdW462vpX3xX6x9
6E7WzXkMd/lafI0dS1SZc/PIe+Dp8Lr3isFI3v1PYe5URMyxZmU4eV6v6o2XwvEpGg3Vb3f9f
OJvbcZTU7Whl2CL+N0uvHU13dvbWvv0PkJsa75rCrz+XVMg57umgCb0c6uS58FGeqC3QRq9nr
SzLsJdWUHTD1+hsVjJvuqWDS4VVffpe6yb8xgAfo+H8qceIuuqW1Ddrh7/mKKqtMz9hYCjncx
LrsWUlYvf6aR53q/E7blf8JDOyXNIwLPJZdWE2C4FnA40fVCBez1Tdi6OgpWofj+KVttn1xVC
DF1JRxyPs6iAuk/eQ9EbyLzoamxTdwjvN2flYM4biXPNqnCbPjG5S3Vs65gJwS/OO/XIJp9wB
vrQkpIBt4fW+XOp/fBtAHyNDZT9517yHnwmfLyi0ZBw4OFYR4/FU12NITkZc25+l1UDelpFWf
V50FmsoQMUVF8Pnyn6+P3OmJxK8glnUPn8E13uYRnRc4eEEKJ/qaqaMxD3lR7obZQlN49Rj7/
EpC/+YNJnv5J66rloo2zdjvO1tlL91qtoLFZMWbnhOZjOkkJs03Yi/uCjuhxvzMjGNCwfQ2o6
3vq64NrMOj3u0iJiZu4WPj/xkKPCvdPrpZ52nnyYF6IHfqezx2kRW0prsaKzx+DqPNRSCLFdM
2XlkHffk0z+ci6Tv/idjPOvCK+rDKCPT2TkEy8Rf+DhaG12YvbYjzHPv40pLSN8TNS4SYx+7i
3MI8egi4sn4+JrSD7u1PXDKFE0Cg3ffQ6AMT0LXWhal7OwoEssikaDZfhIYmbuimX4yG5L7kX
vuAvKP4oqpp9zGTp7DACG+EQyLriyy36NyYyt03JZfUHRakk77VzSz7scXUwsltHjGPPCO0SN
nbDpk4UQ2yzpgd6Gaa3BdRP9blewJ6qHAkV+l4OUk8/Gs64c97oyEo88DseqFUSNm4R19DiSj
j4J64gxNHz3ObZJ0zCkplPy7xuJ22M/VDWAMS2L1vl/ELvHvth3mIWvpZmW+b/TunQhI/7zPH
UfvU3A4yX1tPOw7zCrhyiFEAGXs097oAFM2cNoW74I87C8Pr2uEGLo0prMWPJGbnC/zh5L0lE
nELPb3uhj49HFxnbZrzEYiNtjX6KnzCDgdqFPTA4nzwD6mFhidt4Tc24ejoIV6KJs6JNSMCSn
dbuXqqoEnE40ZnOXawDYJk5l3OufUvnKbDw1laSeeBb2nffockzCwUeii46h6vUXMGZmk3rim
USN6fvE1pSeRfZVt5B66rloTBb0dnuf30MIMbRIAr0N8LtdeOvr0EbZ0Ed3vLF7mxpo/OErKl
+ejT4phfSzLiJ66o7hb3oDXi9NP31DzZuv0L58cfi85ONOI2bnPSl77D6q/vscurh4YnbdG31
CEtE77IzWaMJTW4195m5ETZhC0uHHhHuWK9+ZQ9GtoaWqFIWYvQ9k+N2PYUrb+PJZQmzPAi5n
t96WrWXKzKZ92WIS/zGKRAgheuJ3tLP2oTvDay8DxOy2NyMeeQ59TNdEWvX7UP2+4DSvTiPLt
BYr9p12oeDyjmUutTY7o2a/0eV8R1EBNe+8RuMPXxO72z4kHX1icJnKEEVRiJ4yA9vk6RAI9D
h6TR8TR+Kh/yLhoCNAo+mWhPclRaPp+zWzhRBDlgzhHuIca1ZRcNV5LNhzCstPPYKW+X+E99V
/8TEFV5xL26K/aPz6U5addChtSxeG97tKi3BXlHdJngFq3vkvvuZGql57HgBfQz11H7zJ2gfv
oOnHb6j95J1gj/OOu6CzRoX/sLkrKyh98M6OC6kqTV9/SvuSBZF7AYTYBgSczj4tIgahHuhO/
70LIcTGOEsKuyTPAE0/foOzsGNOdMDjpv7rT1l0xF4s2GcGJfffhquiY2lXZ2UFFc/+p8s1/K
3NtC2cF972NNSx+vKzqHjmERwrl1Lx7COsvvwsPA313WJSFGWTU78UrTaiybMQQvyTJNBDmLe
lmTU3XEr9p++jety0LfqLZacdiaOwAG9TAxXPPNLleNXrpfWvjgRb9fnA373Yl+rzBYtzdCoS
Eubz0jp/LktPOARHwYqu5/n9BNzd12AMeD1b+IRCbB/8Tke4Im1fMeUMC67D3tN/x0II8Q+qt
+dCnwFvx+eEtiV/s/LcE3CXlRBwtLNuzmNUv/4iaqjgqOr1EHA5ul/D1fHZoH3ZYtqXLOyyv3
3JQtqXLeqDpxBCiMiTBHoI81SU0Tr/9y5tAUd78NtijRZNaL3EzhSDCXdNNY2/fI9jzUqid9w
lXD1zvbj9D8U8fCT2nffs0m5Mz8LX3ASA6nHjLOpaFMSYmk7a6ed3adNao7COHLuljyjEdiG4
jFXfDuHWxyWgaDS4y0r69LpCiG2TOWc4tmk7dWkzDcvH0qmOQvvyJaSccAaZl11PxkVXk3X5j
dR98xne2moALFm5pBx/RpdrKDodtknTw9vh6tlaLfqEpPAQ8J5W7xBCiMFI5kAPYRqLBY3ZQs
DZ9dvegNuNzhZN1mU3sPL8k8LtWls0tqkzaPz2cxxrVqK1RmEZpWXY7Q/S+N0XtC35m+gZM7G
On4I2ysbwux6l9t3XqP/yI6yjx2POH0XZf+7puF5UdJf7KlotqaeejyEljeo3X8UyYhRpZ1yI
JX9UZF8IIYa4QAR6oBVFwTJqLC3zfseUldun1xZCbHs0FivpZ19E4/ARtP79J9YxE4jd+wA0n
VbwMGUPo+qNl3CsXAqAYjAw7Nb7UUyW8DG2HWaRe8t91Lz3BrqYWFJPPhvT8I7CZbqYODKvvA
```

n8fjzrKjCkpoFOh+4f86wdq1fQPPcXvM1N2HfcGduEqX3+RSNA+6plNP/xC/62Nuw77kzUhCl
o9Po+v48QYtshCfQQ5He78LU0o5gsZF1+IyV33xjel3jUiXgbG3CuLUaXmMzwux+j5a8/MKam
E7fPQXiq1lF0+zWoHjcAisHIyMdewDxqHLF77I+3oRbHsoUse/Nl4vY5kMSjjif9nEto+PlbV
l9wSvg+MbvujXVU955lY0oqaaeeR/LRJ6EYTGh6qPwthOgq4HRG5AObJW8kzXN/IemoE/r82k
KIbYurpJBVF52GITkN6+hxtC36i9oP3mTihz8QNX4yAN7GepxFBcQfcBg6eyxNP39H9Vv/JSF
UrNDvdLD2gTsIuJ1kX3sb/tZWVl9xDsPveAhzxnFAcKkr5+qVuCvLsY4cS9OvP2BITSemU5Xt
9oKVLD/9KKKn7IA2ysbqS89k+B0PE7fX/n36zO0rl7HkuAPxtzQFGzQaxr78PjGzdu/T+wght
i2S3Qwx7SuX0vz7zziLCqj/8iOyrryFrKtuIeB0YBk9jubffqLssXuo+/BNEg4+iorZ/0FjMt
PU3op95m7Uf/5hOHmG4FDsus/ex5CagTEhCUNaBkU3XwFA619zafr5B0Y+8TJxu+3D+Le+wFF
UgD4ukajxkzAkJG0wTq0lKtIvhRDbDL+jvc+XsQKwjBpLxTOP9vl1hRDbHl9rC6rXi7u8FHd5
aUd7S3P494DLSfbVt1Dz7ut462qJP+BQFK0Ov6MdnS2agMOBJW8kxows2hb+BRoNOdffhb+9v
dP1WogaNwl/azN1n75H1MSp2MZNxt/aGj6mdcnfpJ12PtXv/BdfUyMJBx1By4K5RO84C521o0
d8azX9+kNH8gwQCFD25EPYpu6I1mTqs/sIIbYtkkAPIZ7qSgrvuA5L9jCq33w52FZZTsXsx7C
MGI2zaA31n38AQGtDPW3LFpF54dWsfeTfANR98h7eHqpc+luaaSkpwlmwkoTDj0Fri8bf2gJA
86/f4ypZg23iVCxjJqAxmYMFj6TipRB9xtfWgsbUvWbB1jJlZuOtq8FTV4shIbHPry+EGFqcZ
SU4ClaiMRixjByLMbHji3B9XAKGtAw868rDbdroGPRxCR3HxCdSeONlweWrgKpXnyPtzIsgNI
JGFxePbeoMat97g8Yfv0FjMpNy4pnE7L5P+BqKTkflf58L12do+vEbnEVryLv38Y776nQU3nN
TeLvypWdIO+ti/G1tXRJoT3UVztIitBYLpmH56CzWXr0evs7J8/q2xrrQPG1JoIUQPRuwImKK
opQoirJEUZSFiqLMD7XFKYrytaIoBaGfsZu6zrbMXVlBw/dfUf/1pzhLinCWlRI1cgx1n38YP
qbq9RfJvvoW4vY/lPqvPu5yvurxoI22k3j4sQA4S4tIPPRf3e4TPWMWbcsW0fj9l3irKrHvuE
vXD/OKgqe+ltK7b2LRobux9NgDWHzMfrSvXBaZBxdiO+NvbY1IAq1otFjHTaTpp2/6/NpCiKG
lZeF8Vpx9HCvPOpblpxxO0W1X4ljTsUSVp6aKzIuvxRoarm3OH0XuDXfiCRUIg+BSV+vXfl7/
nlX7wf8IhL509zY20vTL9zT+8DWoKgGng3XPPY63al34GgGXq1txQ3dZCQGXq+M+xYXd4q///
EMIdKwq0L5iKYuP3pelxx3AokN3o/T+2/DU1/bqNYnZeQ/4R4dA2hkXoIvqu15uIcS2Z6B7oP
dQVbWu0/Z1wLeqqt6rKMp1oe1rBya0geUsLmTFucfjDP1x08XGMerp/+JrbkIfF4chKRkUBWf
BSkofuIMxr3yAzh6D7x89zL7mRlzlpSQdczJRYyfia24i++pbqf34XUAl4aAjafz+K/D70cbG
YxkzHq3Vgil7GPq4eFwV5Zhz82iZ9xtVr78Qvq57bQnlTz5I3oPPoI3A0FMhtif+tlZ09piIX
Ns2eQZ1n39A0pHHR+T6QojBL+DxUPPWqzhXdyw/2fD5R8Tuug+WvFCBL60WV3kppowsYnfdC3
d5Ke2rlmHMzAmfo4+JJ/38K9DodARcLnSxcTT/NRd9TBwAqttJ08/fgU5Hwv6H4a6povXPX7u
s2qFsoN5D53Z9fEK3/frEZHTRweKlfpeTtY/e02WoedUrs4ndfR/idt93s18X28RpjHnhHcoe
vw9fUyNpZ19C3F4Hbvb5Qojt00An0P90GLB76PeXgR/YThPoxp+/CyfPAL7GBmrefYOoqTsQu
9f+1H/+Eagqyf86icZfvkOfmEz21bdReP3F4XMsI8fgrauldf4fJB9zCq6yUqyjx1H6wO1kXX
ET7ooyyp96iIDTgXXMBNIvuJKqV+egMRqJGjeJdS8+Te5N96CzReMsXN0txqbffsDf3Ig2KaV
fXhMhtlX+tla0PSw71xdsU2ZQ+cps/E4HWrNl0ycIIbY5nroamv/4qVt757WXNVot6+Y8hurx
dBygKMTtc0h405w3grJH78a9riy8f8Sjz4W/ANTFxpFy2nkYYuNo+PpzLMPySDvtvPA60QDaK
BsJhxxF3cfvhtsSDjkKna1jZQ/7TrtiSEnDs77nWqsl85Jr0VqD9VV8TU00//Fzt+dxFRd2fI
rcDBqDgdjd9iZ6+o6oPj+6aPvmnyyE2G4NZAKtAl8piqICz6qqOhtIVlW1MrS/Ckju6URFUc4
BzgHIysrqj1j7ncZoIOPCq3CWFGJMSUMXG4/WZsecmcPyM/4Vnn9U/8WHjH7+bdxrS9AnpzFq
9hu0zPsdrdWKr7mJypeeAYIJePmTD2AZOZaM86+g+PZrSD39AnKuvwtvcyPm7FxWX3Rq+P71n
39I9lW3Uvrg7dh32Bnz8BHdYoyZuTta+3Y9yl5sB/rj/cbf3orGFJnkVhdlw5I3kqYfvyF+/0
Mjcg8hRN+I1PuNxmLBvtOuuEqKurRbx0wI/676fF2TZwBV7VJ4tH35ko7kObS/7MkHiZ4+E2N
KGvj96KPtrLnmwvAhtR++zejZb4S3/W2tqD4fWVfejK+pAZ09lvYVS/CFhoEDBDxuko85BbQa
VK8XrcXasX40oIuNxT5zV7w1Vdh32g1/eyt1n76HKWf4Fr0+UvhUCNEbA5lA76yqaoWiKEnA1
4qirOy8U1VVNZRcdxNKtmcDTJs2rcdjhqqAx0PD919S9sjdmEeMJnryDJoXzCVuj/1Qk1Nxlp
WQccGV1H/2QXBIlKpS/c5raHQ6oqftiCbKhrtqHfWfvod9h53JvORaUFUsYyYQNWEKbQvnox5
yNLl3PIRGp0MXE48hPYN1sx/rEofq9eIsXI2i1eNraUIfn0jy8adT/caLABizcsi48CoZvi22
ef3xfuNvb0MToR5oAPuOu1D1xouSQAsxyEXq/UZrMBK7y960/DU3PIw7dp+DMKSkho8xZmRhS
ErBU1PVcV6Urcs68gGno9u1ffW1BFxOADy1Nax74aku+wNOB60L54eXhtLaomn+/SfqP/8Qjc
lMwOVEFxtH2jmXhs9p+fM3yh67F7RaFK0O1ePGnD8K+4xZ6KLtaI0mMs6/nPKnH6H8mYfR2WP
IuPBqrGPGd7m3qqq41hbjra/FkJSCKSN7C19BIYToMGAJtKqqFaGfNYqivA/MAKoVRUlVVbVS
UZRUoGag4utvfqcDR8FKnMVrcJeVok9JI+GgIym8/mJy7voP+vQMSm+4BE9lBZbR48i85Fpc5
WshEMDb1IB9p10JtLWhjbaTdNjRxO97MN7aanxNDfhaWyh/4gEyL7mOtoXz0NujcRSsovLlZ8
i753FqP3obAv5uMakBP4mHH0PxPTfT+PWnRE+fSd6Dz2BMTsWSPwqDDN0Wok/429sjUkRsPfv
M3ah+61UcRQVYhuVH7D5CiMHJ73JQWVNNyo33oKmpRDEYcNhiqK9YS1zoGGNKGiP/+yH+qkrc
5WsxpKRhSEnDnDMsfB1zbh5oNOFRcACJRxyHaghVrNbpwN/980Tn4l+q203mzfdSUVtDfX0d8
fEJpCcmobo79X6v/0zi96Ouv57PR3DwIqh+P/Wff4Rl+Egs+aPQ6PS0/T2PqLETMSYHvxRQAw
Hqv/qENVefj7+9DZ09lhH/eZ7YXffaqtdSCCEGJIFWFMUKaFRVbQ39vi9wB/ARcCpwb+jnhxu
+yrbD73JS+cpsSu+7Ndig0TD8wWfwVq0jauqOmEePxblwPiknnok+PhF9XAKemipa/vyVpp++

```
JeuqW/FUrcNTtQ5DUgqWkWMoufeW8BxqY1omycedSuN3X9Dw7efBJHzEaNLPuRS/00nLvN/Iu
uJmWub93hGUVkvMrnvhb2uj8etPAWiZ9xst835j1LOvS/IsRB+KdA+0xmAgdo99Wff8k+T9+9
GI3UcIMTgpRjOJ2dmUXnk23rpgpWrr+EkkX31b+Bi3w0Hbrz9QfMd1oAYT1cxLr0drj8Gcmh4
8pqaK0XPexFVaDAroY+NwV1cRaGsG0kGrkHLKORTfdnXHvQ1GoiZMDm972tsobmlF43CQotXg
dDgoaW0lr71jHejo6TMZ+/qnuIoL8DudwWlkBiO66BgAvHW1GFMzKH3oTvytwXWq7Tvugrexo
5Cqs7iA1ZedhaLTYR4+Anf5WlZdcgaTPv4JU6b0RAshttxA9UAnA++H1hLWAa+rqvqFoijzgL
cURTkTKAWOGaD4+pVzzSpK778tvG3+10n8VVXN6uXL2Pf8K3Et+ZuSO68L77fvtCvxBx5O2hk
XYZ00nbWP3EXmRVdT/uSDwf2zdsc6Znw4gXavK8NVVoK3rhbrqLF4KitwrF5BzK57o7GYsY6Z
QP0XH5J97R00//YjWpuNlONPxzxqHEsO271bvG1LFxG/z0ERfU2E2J4EHO1oI9gDDRC/78EUX
HsR6WddjDl3y+YJCiGGJldrC41vvhpOngHalyzEv2oZ7LxH8Jilf1N6763h5Bmg7PH7iJ4yI5
xAm3PycKxYRMDnRfX5UX2+YHKr0QKgOlx462vJu/9pnMUFKEYj1hFjaC9cTexuewfvG2XDuuQ
v2t97g/bQfaxHHo9zdMfwa7/LxZqrz8ddsRYIVuge+cQrHQ+k11H7ybvh5Bmg+Y+fSTzyhPC2
p3IdKcefhsZswVVaRPx+h+Kpq8ZTUykJtBBiqwxIAq2qahEwsYf2emC7G1vjdzlJO/MiGr/9H
FIz+HRdJcaqavabOJEUAhQ8dFeX45t//4nkE8+gbckCPOvKyb3hLvyd1k9s/vUHsi67ocs5zj
WriN3nIGr+93K4zb2unNjd9ib31vtxlRbhLF5DxsXXYBkxGn20nYDXS/QOs6h9/39drmUdOSY
Cr4IQ2ydVVfE7HREdwg2gs8eQcNARFN91PWOefyui9xJCDC46n4/2VUu7tXcuKuZtaCDg9RCz
295EjZ2Io2AlDd99gaehY7XRgNcNWi3N33+Nt76W2D32xZ+QxPqUWyWAkpaJq62Fph+/QRufi
CF/NIbkjrnWutYW2v/xuaL9/f+RcNCRHdtL/w4nzxCsy1L+7CNYx03ClJqG6vXiWL0Cy6ixxO
62D76mRuo++wBfc2PHfRKTaFu2iNb5f4Tb4vY+EH1c9yWyhBCiNwbbMlbbFV97Gw1ffETJfbf
ib28j8bBjcM/anZEL5rP7jrPQ6bQoBmOXb1jXc5etpWL2YyQfcxLNf/1Jwv6HdNkf6FStEiB6
xiw0Gg2utcXhNsOMWWjHTMQWG0v0pGnd7qHR60k/+xKa5/6KJ1R1M37/Q7FNmdEXjy+EIFhgR
2MwoGi1Eb9X/H6HUHjDpdR/+THx+x2y6ROEENsEn8GIbY/9MOcWETV2Aqqq0vjD15gmdvztN6
RlMPyuR6j96B3Kn3mEqPFTGH7nI12LiDnaqXrjZeL3OgBFq8FRWIAaCISreWss0dDWSvm/O77
Eb/39R/LmvBne1vl9XXq5AVDVYHuIt6mRf/JUrcMXGuatj0sg59rbaZn3G+tefBp9fAIZ51/e
Zai4v6WlS/IM0PDNZ2Reeh1CCLE1NAMdwPasbeE8Cq4+H29dDQGng/qvPiZeUZjqddH48TusO
OtY1s15DPvM3bqcpzGa0OSNJOHYk1n3/JNY80YEv0UODolHYzR1FPpQFBIOOYqYXfeiZcnC4A
W0WqKOOJ6Pfv6Rhb/8sNEYraPGMuGdrxj7348Z/87XDL/n8eBSFUKIPhGc/2ztl3tpDAbSzrq
IwpuvwNvY0C/3FEIMPLfLhXb6zkTvuAsAik5P0tEn0dR5bXgNlD/zCC1//AyBAG2L5lP6wG2o
oc8WAH5HOzE7zKJizn8oe/x+3GUl6OMTUNVgoS+Pz03ta891ubfq8+FcvCC8bU1JxxAaEr6eI
TUda0pHmzk3r9szxO93CNpQrQhFq8VZVEDtB2+ietx4Kisovf82VH9HcbOAs73bNYLP0L2SuB
BC9Ib0QA+gpt9+6rKdetr5lN52NSnHnkLVf4N/gJp++pZRs99AG2Wj6cdvMA/LJ/nks/n9z9+
xJqUTnz2Mlvl/kHzMyWgMRkx5I4g993Ka//yVzIuvQZeaji41g9qP3kZ7xHE0Z+TgD6i89sUn
rFy0gNaAn10OOWKjcRpT0iRpFiJC/G1taM2RWQO6J9ZRY4mePpOiW69k5GMv9tt9hRADR6fTE
O11U/LS03jWlQMQPX0n0s67PHyMr74e99qSLuf5GhvwVq8LbyuKhspXZoe325b8jSEtg5jd9w
3ud7t7XNNe02mEjd/jJvva24PXrq9FH5+ILjYOv7tjKprbYiXhxrtpfflZfM2NWA4+Cu2MnQm
4g2tSe+tqqHnv9W73caxYQsyOOwOgtUZhHpYfXPIzxDZlRkSmy3gbG2hfvhhPdSWmrBwsoyeg
s/bPF6NCiP4nCfQAUVUVnT2mS5uSmIwhIRHHquXhNvPwEdR/+Qme6kpSTjqLgM9LW0khozOzu
eHW67ntqusxFK5CDaiknXkhFSkZBAIqP1RWkxJQ+PHtN5m19wHsYo3C9c2nvPHFF1QUrQlfPy
t/VH89shCiB/721ohW4O5J8jEnsebGy2QotxDbCWNAperLj8LJM0DLvN+J2/tA2GM/IDhtC62
22zJUmvVLVAHu6spu127+/WcC3tC0Ma2O5ONOoeTum7FOnk6grRV3WSnmEaPDx/sd7bQtXkD9
Zx9gHD4Cd+Fq4g88HHtMXPiY1TU1PHr7jex36FFER9v56rOPySst44q77g/dR4shNQPfP0fSR
NnCvyp6A4mHHo2rvJT25UuwTZqGNiYWjdHQuxdvE3ytLax9+C6qXns+3JZ76/2knnw2ikYGeg
qxLZL/svuJt7EBT3UVamjej6u0iIDDgSEtI3yMao/BU1uNKbvrmovtS/+mbcnftOaPYl50HP/
59hs++u0XLn/kGRwqJBxxHNVvv4ovLgG7PQZH+Vo+fft1nn/iYdYsXcziv+bStugvPIv/ZtSE
jtpt9vgEdj54473PQojIivQSVj3RGE2kn3kRhbdeha+tddMnCCGGtIDXS/vyxd3aXWWl4d9VI
OWEM7rsTzzs6C5DuANx8d2uYR4zDq9OD4Bfq0UdO4n2G+/hxeY2PolLxnD/0+g6DdnWarU0GU
wsnrUXz6yrZvGsvWgymNCGrgFQXlJMe0sL7/33RV566lHWFRey/K+5OHzB5L61uZm4cy7FlJu
H9YQzsR58JKYx4/GkdnymIiWN5rUltPz5G4bkFBp++AqXx4O28zF9wFGwskvyDFB67y24Sgr7
9D5CiMFDeqAjzO920fTTt5Tcewu+5kZSTz2P5KNPwt/eRvnTD5F2+gVYxk3CmJgcrMZ96vn42
1uxjBqHY+VS2pcvIXbP/TDsvh/fzf+T92c/CcDyeX/w66cfctdr79GsN5B2xgUEXE7UFcv48N
uvusQwfco0HB++Seqp53LqIf9ix4OPRKPRkDdhMpl5IwbiZRFChPjb2iJegbsn1tHjiBo7kbU
P/5tht9zb7/cXQvQjs5nY3falsvjpLs1RE6eGfw/o9dim7oBlxGg81ZXo4xLRJyaB0Rg+pk5n
wDRzd1y//QCAzh6LZ59DaHe7iAMMisIP8+by+HWXhc/55fOPufu195k6NvgFvkNVef7Tj1mxK
DgveuVff7Jg4hRunLUbMaFzcnI6CpetN2OX3THpg0l2u8vJLwUFtO64O1+89jKxSckcd/GV1K
4tJSd0/NqSYj5cV8kehx+H4nHhmTidV7/7mtNLisgbP2kLX8ju/C3dC70G3K5wwTMhxLZHEug
Ia1u8gJXndqxLWPbIv9GYzcTtdSCxex2IbcasYO9wZTn62HiiJk5G0emx7rwHvpYW/GXFGBKT
aTVZ+eyM47peu7mJtWsKyBo2nFY0JKVmEKioIKrT0PBdDzqcfDWAceIUko44DnPOMDIkaRZi0
PC3D0wCDZB87CmsufZCUk86C/Ow7kV7hBDbBo1Oh33mbrSvWEzL3F9BoyH52FMxdKpvorFEUf
```

rYfV3mDOsTk8mf/UZ4W1UUvkbHThdegy7gZ63DSf3yJRwbmgPd4nLywXNPdbm31+NhxaIFTN3
nAACqHc5w8rzeikULqHY4WR9NqlbDv045k/dee4mA38/oSVPZZ9oOBDzBOdAavYGaijI+fuGZ
4H0bG7j/4rO55cWOat9et5tvP/uIbz/7qMu9TgrNo+4rpuxctNYo/O1t4TZz3kiM6Vl9eh8hx
OAhCXSEtS6Y17VBUTAmp1L+9MOknX4+zqICvPW1aAwG3GWlKBoNjuI1NNVU8/DXX3HmOReS8P
E7aI47A62u+/9cOr2ev3/7mTcff5Cb732UjJgYztp3f0478VRqClYTp0Dy3gdgzs1D12lukBB
icPC3tw5YAq2LthN/0BEU//sGWRtaiG2Yz+NB0Wiw5I8iZuc9UQN+fE2NBFwdFam9tdVoo2xk
XXVLcHk9k5nmX3/AVVkOoZ7qFJ+XSbvuzuMP3k1LQz37HH0CB0yYgN7tBECj1aPV67vdX9epz
R0IdNsP4OnUrouyMaO0gOnX34JPVTGXFmJwtOHTh+Yvq/DTh+90OV9VVWrKO9aOTh+eR1rOMN
Z1Wut61NTppA/P39yXbbOYc/MY/cLbFN5yFc5Vy7DvtCs5N92DQdabFmKbJQl0hOk7zRcy5ea
Rft5lNC/4k6QjjqXu03cxZw/Dkj+K4juvg9Afj/gDDyf1Xyfh+uhDSpubqZ+yE7qSQo69+Cpe
vPvW8PXiklOITUrhl08/4Nobbkfz6F2sDRXUMKZnkXLkcQR8PmzjJyOEGJz8ba1ojKZNH9iHm
uvrKS9czcjJ04nf9xDWXHMBLfN+J3r6Tv0ahxCif2hVlerff6QuMY3CyiqMBgM5UTYstTXhY3
wmM/addmXtg3eE21JOOAPV2vHleyA9kx9efZFdDjkSa7Sdhb/8gPfgwwisr7LtcXHgSWfw1I1
Xhs8xR0WR2qm2iz0mhqm7781fP3wTbpu6+97YY2I6jknPxHzMydR99DbepkZi9z2Y6B12xhua
j60nQFxyCs31dV2eM7pTPYm25mYOPPVsChYtYM3ivxkzYycy80bQ2thIdGwcfck+fSbj3/gUX
0sThvgEtFbpsBBiWyYJdB8LeL20/v0n1W+9iur1knj4scTudwgJ+x6Mp7oSb0Md8QccRtvC+T
iL1pBw8FHUffIe5uxhOIuD1bHrP/sA65jxXPPgE9x10Zm0hJLimQceyjVPPs8fX3xGZv4Iske
NoaG6knVFa7DHx9DeqRqlu2Itfkc7iUed0GOcQojBwd/WhqbTHMNIa6yt4eHLz8MaFc2Pce9w
7l0PkHjk8RTfezMT3vkapVPBICHEtiHgdlGTns0tV15EIFRlOzo2jrsefIyU0DFaRcO6F5/CO
mYC1rETcK5ZRdUbLzJ8/0PD11lTXMjfv/2E2WJG43RQW76WFx99gJuefpFowGS2MHXYcG6+83
7+mP8nsbGxTBszjqT4js6EWFXltMOPYocp01i2chljR45hdHYOMQE1fIxryd+U3Hkd9p12xZI
3kspXn6NlwVxS7/oPABajiVPPvpA7rryQQKjzIT07l2FZ2eFr1Fet47nbr2fY2PHkT5zCyvlz
+fp/rzJp591JHza8z19jfUws+pjYPr+uEGLwkQS6j7UunMfSEw4O9ybXffwOY1//FMfyxbTM+
w1fezuG+CSsYydizMii7PH7cRasJHb3fUm/8CpcxWtwlRShqrBmycJw8gzw22cf4Xa0c+5VN/
HUPbdRUbyGfY8/lbwx41E6VdJcz9vYQNSocf327EKI3vO1taDtxyrcn736PKOmTGf6nvvx0Qv
P8OdXn7HjvgdQ//mHNHz7OfF7H9hvsQgh+kfAYObdd/7HyAmT2Xvv/XB73Hz4/tssLy5m/acE
X2sTmZdcR/uyRTT99C3WsRPIue5OvE2N4es4nS7u/feD8Om7BMqK2PW4E1jQ5sDv9gCgBvy0P
PsIhiV/s9/wEfjXLMX90f/Q3nI/7LIHAHqfl6Y7riEjysbwjCzc775KU1srKa98GL6PZ10F+P
00//J9uM1VXIjWE7yPJSWVkSkp/PuuByhrqMdiNJFpjybO0rH2ckJqOnqDgaJlSyhatgQAq91
OXEpqRF5jIcT2QxLoPta2dBGZF18DgKe2hphd9sDf1oK3sR5DUipRyamogOrzUXjdxfjbWtHF
xWPJH0X5Y/fhWluMZdRYEg47mvbvvul2/frqKkqrKpi025401dbicrSTO2ESWo8TFnctyhG39
wH98chCiK3gb2tFFx3TL/dytLWy9I9fOfGK69FoNOywzwF889Zr7LDvQSQdfRKl991K3B77oa
wfjimE2CZ4CLDLrnuQU1ZE+0tPojWZue7YU6nqtPayJSmFkofuxLFqefCc6kraVyxl+GMvho8
Zn5WJ69vPiD37YlS3G7/bzU4V5ehCiavW68XbUA+qinPNqvB5voba8O9utwsIvvc5Vi7r1O4M
/24d17Hk5npx+x6EJZT8ao0mooaPJL2shFSbFUXRoLVFEz26o9MgM38k1z3zMvdfeAZupxNrd
DQ3znmNtJxh3a4thBC9IQl0H3KVldL47Rc0h5Z3sO+8O+2rU9EAik5H3L4HobVFU/H0w0SNm4
Q/tP5qynGnsfbhu8IVHB0rl1F8+7Xsec/jvPbUo13uMevAQ2mqq+Wl0FzoUVOmMee265n98be
YHA5qXn8eRacn44Irsc+Y1V+PLoTYQv62VgzJ/dMjsmzu76Tn5mEKfdhNycpBq9ezZslC8idP
p/6z96l57w2Sjz6pX+IRQvQPvUbHGFRqP30fCFb/b3vhSUY/PKfjoJbmcPK8nqeyArWpYyScW
aNFN2YirqI1qH4fGksUKTvM7ChGZjCQcPCRVDzzSMdFFAXLiDHhTbfFiiErF8/a4nCbISsXty
UqvN0Wm0DGVbdQ+eyj+NvbiNvvEAy77YveFh0+xjpiFPrYOFxri9BarJhy89B2Ksio1WrZ7fC
jyRs/icbaGuJT0rZ46LZjzSqcxQVobXasI8Z0qW8jhNj+SALdhxq+/TycPAO0L1tMwoFHUnjz
5RCac5R83KkEfD401o4/FChKl+UPIDiH2eLzcPkjz/DR80/R3trCQaeejaO1BdUfCJ2moDMEK
1KuWFPAQTf+m/TTzgOtBlN6FopGE9kHFkJsNX9b/1XhXjb3N7JHjg5vK4pC3vhJ/P3jt4yYOJ
nkY06h9KE7STjkqC4fRIUQQ5vqctD25Ufd2h0L5sLhxwCg6PWgKKCqXY5R1le+JpiUVn36Hi3
zfg9uW6PIve0BDBnBuceqzoh17ATSzryI+s8/RBcTS+IRx6Lv1NPd0tpG61EnEbt4Pt7FC9BP
mELjhGkY2zrWTf75m8/58+cfOOfm+zAZDHz53df8cuGZPPPFz8Rl5YSPMyQmYUhM2uBzazQaM
vNHkpk/cvNfrH9onvcby087ioAz+CVB3L4HMfyORzAkJW/xNYUQQ5tkWFvA72jH72jv0uaurq
Thm8+6tCUedgylD94eTp4Bqv/3MklHHo+i1WINVcfWdPrjtJ5iMKKx2vjlk/dIG5bH+J124Z0
nH0ENqOF1ng885SxaQ3OTYhOT0ej1mHOGYc7MkeRZiCHC21iPrlOvSqQEAioFS/4mI6/rB8lh
Y8ez7M/fUVUVy4jRWIbls+75JyMejxCi/2iNJvTDui/ftD7xhWCinHjYMV32x+6+D1qzJbztq
awIJ88Q7MmufuNFdN7Q2sptzdR9+j7GnGGkXH0LSWddCBoNzQvmhs+Jt8fw5/w/eb6wmPk77M
Zza4r4868/ie9UhTsxLYMV8+dy+Vkncf4px/DBS3PIHp6PvnPnQz/wNjdTfOd14eQZoOGrT2l
btrBf4xBCDC6SZfWCr72d+q8+YelJh7L0hIOp/fQ93LVVeBvqKbz5Ciwjx3Q5XmuNwtdQH942
5eYx7K5H0Ccm41i9guipO5J52Q1oY+NIPe28Lufaz76El195nhl7H8DSP37l6/+9SnN9HR/Me
YLo+AQuuu9RZuyzP+8/+zgTd96NkZOn9strIIToW77GBrT9kEBXl5ViMJqwdfqQChATn4jeYG
BdUSEASUefxLrnn8DX3NjDVYQQQ5EaCJB2whloozqWVzLlDidmwpTwtre2moDHTd6Dz5L/8Bz
yH3oWXWIy7oqy8DGeTsO513MWFuAPVdDWmswoo8fzR2kpt953Fw/NeYZijw9jp2WsWn1eDj/g

QA496DCMRiOHHXw4R+x/EK3ejs6GkeMmkDd2fEesFgsnXXI1PrXnNaQjxd/WgmP1im7tnk7Lf
wkhtj8yhLsXWub9ysrzTgxvr774dHJvvhdjZjZNP33DyCdfxZiRjb+pAVdZKaqiYB4xGufqFS
T96yT0CYmU/PtGFJ2OlJPOwjpqLIU3Xkb2zfcRGJZP3tOv0bS2mMr2dp798D2W/j0fg8nESVf
eyAv/vhkAl8NB4dJFvHT3rVzx6LOcet2tTJi5K/FSVVKIIcnb2IAu2h7x+xQvX0Jqdm6P+zLy
RrBq4XzSh+dhTE3HNnVHyp/9DznX3BbxuIQQkadVAzStXEr+Q8/gqapC0evRxyfgXrMKdtwZA
ENaJvYddqbq1dm0LfoLy6hxJB93apfkV5OZ0+3a9j33w2cMTvkIKAordUaeuP+68P5Ff/zKw2
9/Gl4uy2y28NXChey+w0yGJScTsNr4Ye5v7DdybEe8S/7mqosup8rnx+Nxk5aYTOB/LxA1o3/
XqtcnJBG3z0HUh+aOr2fO6ftlsIQQQ4ck0L1Q/fZr3doaf/qG2L0OIO/eJ2iZ9yuVLz6N6vVi
GTmW2H0OInrydNY+dh/mvBGU3ntL+LyKpx8m+5pbSTzqeDxOB3VJqSwoWMXL996Os61jPrTH5
cLn84a3x+04i5V//YnOYMDlaGfK7ntJ8izEEBVwu1E9bjSdhkhGStHypSRlZPW4Ly13OKsWzG
fPo44DIPHwYyi88TLSz7wIfXxCxGMTQkSWotViSs+iYvZjtP41FzQaEg89mrgDDus4SKNQMed
x3OXBZTEdK5dS9ujdjHr+7fAh7fZY4i64kqYXnybgdGDbaVf8u++Ll2DPsMvn5Z3ZT3S5d8Dv
Z/mCeUzYc18AottaGTdyNLfcfDU15WUkZWRyyZU3EN3aEj5Hp9VQceOlaAEz0Eiwx7y/V6nXG
o1kXXo93rpaWub+gtYaRfb1d2Id271KuBBi+yEJdC/oY2IxZeWSdMzJBFxONDo9xoxsLGPG0/
LHT6yb/RgpJ5yBISmFgM+Lv7kRXWw+qRddQ/UzD3e7XuuCecTstheLqqp56f67uOzhpzFbo7o
k0AAmswWLzcaMvQ4gb+Ikfv7oPW6a8zrR8fEb7FESQgx+3sZ6tPYYFCXyHwvXrlrOnkcd3+O+
9Nw8vn/3Tfw+H1qdDkN8ItHTZ7Lu5WfJvuLGiMcmhIgs1R+g5bcfg8kzQCBA7QdvEjVpWvgY7
7qycPK8nq+pEU9ZCUyeDoC9rQXvrN2Jzs0DlxMlIwtnQwMmnw8ALQrWqO7zlI26jo+bWpMRzc
N3cN3hx+BNTkNfvQ7Xw3eg6ZSo26fPRNHrUb0dHQgZ51+JLlQDpj9Z8kYyevYbuNeVoTFbMWV
m98t7thBi8JI50L2QfPRJpJxyNmsf+TflTz6I3+XC19RA1StzQFFIOeEMPNWVtC6cR817b1B4
0+X4GmpxtTVjysnrdj1DShr+1AyeeeIRasrLmP/tl5x63iVdjklIS2fcTjtz3h0PkDZsGGaLl
aSMTBSNQlb+qP56dCFEBHgb6tDZIj9829nWRnNDPbHJKT3uN1ksRMfHU15YEG5LOPBwqv47p9
sKAUKIoUchQPO8X9EYTdh33gPblBmgKDg6rdWsi4lD0XXvV9F1HoVii6bmtmsoufp8Sm6+gpK
zj8NiNqPzh+ZAqyrHn3ZOl/NtMbGM6lT93zpmApmX30BsXDzRhSuJjYsn8/IbsY7pmPMcNW4S
417/hISD/4Vt+kxGPv4ScfsctEXPrqoqfpdri85dT2eLxjpyLOasHEmehRDSA90bppzhrLn5S
jIuvgb7jrtQ9+Fb1H74JsPufAj8Kpb80TR8/Skt8/8gdrd90MfGU3r/bcTuvjfRU2fQ8NUn+F
ubAdAnJGKZtiO333o9LY3BohwLfvqOw+5+kFufe425P3yDPTae+NQ0KorW8PDl57H3MSfy88f
vkzF8BDUVZSRWrCU2acPLNwghBjdfQ32/zH9eu2YViWkZaDdSnT81O5fCpYvCy1wZU9OxjBpH
zXtvkHry2RGPUQgROW5/gMQjjkcBGn/8Gq3VRu6N/0Yb2yk51htIOeksHKuWYx0zAcealejjE
1GMpvAhgXXluAo6imqpPh/VTz2I+dEXANDodYxKTeOOux9i6eqV2KJsjMnOJtHcsSye3+mk5c
/faPjqk3Bb3L4Hk3DIv9CFipwpGg3RU3fENnkGqt+PRq/foud2rFlFzbuv0/TrD8TtfSCJhx6
NOWfYpk8UQoiNkAR6M3gb6nGWFYPeSM61t1Mx5zHWPf0IURMmk3//UzTP/YWqV59DY7GQcuyp
aMxmqt94kagJU7BNmY7WaqPknpvJvvo21IAfRVEwZg/jkcceZPWSReH77DRrV6puvoLovQ9i5
fw/aW9p5sJ7HuH5u24iJTuX3Y84msz8kZSuWsET116KNTqaJ77+vcu6rkKIocPbUN8vFbjLVq
8kMS19o8ekZuWyZvHC8DxogLi99qfy1TmknHSW9LoIMYQZLFYMSSkUXndRuK3ptx8Y3WnYtL+
5Eevo8TiLCqh67XmiJkwmZtZuXVYT8dfXdru2u6IMQkt7+gMBFLudHK1C7pgxBAIB0Ch4DR3L
dTpWLOmSPAM0fPUJKSecgTFxry7tikazxctyumurWXXxaThWLQegfelCmv/4mVFPv4beHvkvL
oUQ2y5JoDehbekiCu+8joR9DyJq/GQKb7oU99oSAByrV9L8x8+UP/lg8ODmRtY+ejfZ195O6/
w/aFu8gKRjTqF5yUL8rS0U3XIFAIpeT/4rH5KUlYtGoyEQCDB91z2YGheHc105sSYTp1x3K3H
JKej1ei554HHiU9K4aJ+dcLS2hmNrb2mhaNliSaCFGKK8jfVdlpWJlJKVy0kf1n0aSWepucP5
6eN38QcC4Z5q65gJBFxOWub9jn3GzIjHKYSIEJ+Hqpdnd23z+2mZ+wtxuwaTVn1sAsW3X4Orp
AiAlj9/w1lUwKhnXg+fYszM5p/i9jkIncUavE1AZXXBKoZlD8Pb2IDGYEQxWygsKSZ15m4ABN
w9D6cOuJxb/ZiduYoKwsnzei1//IyrZA36ibL0pxBiy8kc6I3wNjVScO0FxEzfiYDHQ+vC+eH
kWTEYSLvgChq+/bzbeY6ClRjTMgEwpqYRtdf+RO2xH2g0GHOHM+w/L+BZs4Jj9j+Ix15/n3tu
vJ3j4uNwPvcYKAq2nXZlzPQdmbDTzoyetgNTd98bi83WYw+QbguHNQkhBp63vjbiCbSqqqxdv
ZLkHj74dma12TBbbVSVFIfbFEUhdo/9qPrvnIjGKISILMXvR+nUC9xpT/g3T01lOHlez1tX22
UdaH1iEllX3YIhORXFYCDxsKOx77JXeO60LSaGBoeTl197hZVrS1m0ehV333cn9k6rhRjTMrG
M6PrFv2XEaIzpPa8SsKV6ms+9sXYhhNhckkBvhLNoNYaEZMwjx+BrakT1+Ug+/nSG3f4gw+96
FH9zM4bE7kV59LFx+FpbiNvnINzVlay98GRMo8aQ9/L7pF5wFVqfj7L7byfgaMej0RAfn4BSX
4N95m6MfeUDEnfalaT0jC7XTErP5LTrb+/SlpiWzvBxspSCEEOVt74OXYSHcDfW1BAIBLDFxG
7y2NSc4DzozmJ23oPGH77G19wYqRCFEBGmoJB2+vld2jRmC9HTO9ZV1trs0MNwaV2n9w7HimX
oYuJIOf0Csq64GevkHWj68WsCoSWotCYz0yZMZMKsXXj3kw/45c/fOfPqm0jv9EWhMTOb7Ovu
IPm40zDnjST5uNPIvvZ2TD2sMb01zMNGED1z9y5tCYcdI2s4CyG2mnwNtxGKwYRl1Fhq3niJ2
L33x5iZi3XcpOAyDxoN6+b8h5zr7qB57i+oHjcA+oQkzPmjybz0OjQmE4pGS9z+h6FLSuW/Lz
zLrIMOJ6OyAuPwETTbY0gZPoLEvfaH404BrRZtp2Id/7TvcaeQkp3Lb59/RFb+KHbc90DScuU
PgRBDlbe+FuvIMRG9R8nKpaRuZuXYtJxhFCxawK6HHhlu09miiZo4lZoP3iLt1HMjGaoQIkIC
KGisVobd8TCqzxtMlFW1S2+sxmAk+dhTqX7jxXBb/IFHoDEaw9uKPYaiq84jetqO6GLiaP7jF
8xjxoXXsvfW19HwxIMklxZy7bGn4m9qpO6KM3FedyeEpoHoo+1YRoxGDahEz9odrdmCZcQYdN

F9+2WiPjaO/Hsfp+mX72n56w9idtoN+067orV2X2ZLCCF6QxLojVADfqpenYN51FgseaNxV5T
RtnQRDd98ijE9k9yb7qHq7VfJvOhqAh43ilaLZdQ4Ai4XAWc79b98z8KkdH5ZvJii1/+Lz+ul
bF0F5517Ma2HH09CZg4pWTnBm4XmD22MLTaWWQceyqwDD43sgwsh+oW3oQ5thKtwFy5dTHLWx
odvr5c2bDi/fvYhgYCKRtORcMfuujdVr79A6innSDExIYYirYa2v+eher3UfvoeWouVpKNOwB
Walgbga2nCNmUG1lHj8NRWoY9LQB+fgDe0UghAW3QM0bP2oOWX74KXtUUTfeJZODxurIBiMOI
qK8ZTXUn1Y/d2XLuxoxAZgCktE1NoqlskmTKySDnuVFKOOzXi9xJCbD9kCPcGeBrqCLS3E/C4
yb7yFtw1VaBRcK9bi7e2mraF8ym+63oS9j2EtQ/fRfmTD9L43Zf4mpvQxyVgTMukdsbOvPDo/
az++y98Xi8ATfV1+FLTGbP3AWTmjRjgpxRCDCRfQ33Eh3CvWbKQtM0cshgVHYPJEkVlcWGXdu
vYCfjbWmn9e14kQhRCRJiiqqDVUjHnMTzrynGuWUXpfbd26V3W2WOpevtV3FUVoKp462upeOE
p9PGJHcc4HRhiY8m87HoyL76G1JPPwbHkb1StFgBjcgqJhx7d7f62yTMi/5BCCNFPpAf6H1wV
ZThWLkVjj0VrszHmhbcpufcmHMsWAxC7x74kH3MK1W+9gur1ghoAIHrGLFJOOB1tdAyVb7xIw
r9OxOTxoCgKqqqGr/+vCy5n3A5SzVYIESxUqLVFrge6ub6e1sYGEjaxhFVn6cOGs3rRAtKHd1
TtVjQa4vbcj6pX5xA9RT4ICzHUKIEA9V981K3dsXJp+HdfazMJex1I2WP34m9vQ2M0kXHhVV3
qH2grK6j8+N0u19DHJ5B91AnB+ygKKSecgbe+jpr330BrtZF9za1Ey+ceIcQ2RHqgO3GsWcXS
4w9ixdnHobVYqHrnNeo+eS+cPAM0fv8V+sQkFEPwW1t9UgpjX/2QjAuvQp+UQuPXn2I88HDOO
v041tbXccfLbzF62gzSh+Vx2cNPMeugwwfo6YQQg0nA48Hf2hzRHugV8+eSmTcSTS/WUU0fls
+qBd17mmN23ZuGbz/HW1/XlyEKIfpBAKXnoqcJSeHftSYzZU/cj7+9LXiO20XZ4/ehDc1vBjB
EdZ8/rItL6LJtysxm+F2PMOWb+Uz+7FdSTzgDnTXyy/UJIUR/kR7oTuq++AjbjFnkPfAU9Z+8
hyEujvrff+p2nGttMcaUNNDrMaZnoLL0FpttC5diGPkOGYdeBgjd9qFsTN3ZfKe++H3e
rHFbroKrhBi++AqL0WfkBTRJVUW//4TWSNG9eqc9OF5fPfe//B6POg7LXujs0Vj33EX1r38DN
lX3NTXoQohIsloIPnok2j58xdUnw8AXVw85vyO9wefow1/qJr2eqrXi7e5ObxtSs/CkJaJZ11
oaStFIe3MC7sMBQfQGAyYs4dF6GGEEGJgSQIdoqoqxuRUosZOoODys/FUrcwzblB1wFqzs
cmzUxGlEz9wNU0Y27csXY8rNx1NdScXs68m94yFiDjiMmSefGT5e3+Pai0KI7ZmruBBjyuYPr
e6t9tZWipctZdaBh/XqPJPZQkJKKkXLlzBy0tQu++IPOIziO68j49zLpJKtEEOI0t6Gz+kg64
qb8DU2oOj1KAYj/vb28DE6eyzaKBv+ttaO8/R6dHHxHdtmC2lnnI+/rZWAy4UuJhZjRg4aWVt
ZCLEdkSHcIS1//UHLwnl4a2vwVK0DwFVShCkrB8uI0eHjYvc+EENKGqrXR9vf82j65Qd0Nhum
nGGMf+sLkg87BnOUDFUSQmycs6QQQ1L3IZV9Zd63X5A9ajRGk7nX52bkjWTFvLnd2o2p6VhHj
2fdK7P7IkQhRD/RWKzU/O8lSu+/jcpX51Ax5zHKHr0b55qODgKNwUjuHQ+Hl6RSDEZyb30Arb
njPUR1OTCmZ2HKGoY5Jw/rqHG0Ll6AISm1359JCCEGyqBLoBVF2V9RlFWKoqxRFOW6/rqvt7E
BfWwCvk7fvAKUPXYfUZNnYNlzrN0/LzBq+7FUPPUQrfN+mvrqtV0k++iTHr0lNIy0Uhv
sxBiMziLCjAkRyaB9nl9/PjBO4zfaectOj97Xj97xGiW//l7j/uSjjqBdXMe61JYSAgxuAUA1e8P/
u5yBougAqidjgkE0FjM5D/0LMPveZwRj8xBF5+AonR8VLRNmYGnupKimy9nzX0XsucNjc7x
A0en0/Po0QQgysQZVAK4qiBZ4EDgDGAVcrSjK+v6599HIR8+n8MyTsdUt8AgAAjIm0vf1ORw4Vy4j4GwPFvWJjevYGQigi44Go5H
iO69H9XrIvuHfJB9/OnkPPUv78sW0On2P2FdXMeo2WhLPEihNg8zuI1GFLSInLtnz95n5iERJIz
Nm/9539KSM/A6Wijdl15t33GtAxsU3ek7PEHtjZMIUQ/UX0+Uk8+u0ubotMRNXFKeNuUlELA6
cJVUYanuhJXeSmq24XOHhM+Rme1kXry2Uz67DcmfzmXUY+/hD385bJE0KIbcVgm7QyA1ijqm
oRgKIo/wMOAt5Z+qZH5Hn5BE619zST/nUnXT+JgMtF78DnnnEXC78be
3oei01H/5CbVvvRK+jmPlMuL3OiCSoQohthGu0iIMKSf3+XVrK9fx9ZuvcsTZF23xNTSKQu7o
cSz69Wf2Pvr4bvuT/3UCa667mOTjhN336Bzh5L9IxZuCs7v
iQzJiVjzR9Fa3srqtuFxmzBnDMcc1ZO12spCqbMLftyTgghtgWDqgcaSAfKOm2Xr2/bSm2lu6Sl2cHj1Urt5Xq+sgaaNTsuN
iVjzR9Fa3srqtuFxmzBnDMcc1ZO12spCqbMLftyTgghtgWDqgcaSAfKOm2Xh9q6UBTlHE
VR5iuKMr+2tnarb6rR6YjeYRYN335G4mFHs/bhu2hdA9Fq6Pxx29R9Aaa5/6Kp+AMPJ2a
XPal9/39dkmcA87D8rY5FCDG49PX7DUDA7cZbX4shMblPrree2+XipbtvYdru+xCbmLTpi
d+wEFv70XY/7dPZYEg8/lsIbL0MNBLqkKIDpF4vwHQR9mwjZvA2kfuIeBy4ioppPL5JzClZ
XY5LmrMeFJPOIP0sy8h7aSzsE2YsoErCiHE9muw9UBvFlVVZzmVNttjiNltH+
q//oyK558k8+JrQaPBmJ6FMTuXyqWLMI8cjX3iNEzpwT82Ged duQeu83/FUVwIQf+Dh2CbP2Np
QhBCDTF+/3wC4ykowJCajaLV9cTkAnO3tvHDXTcTEJ27x3OfO0nOH811DHVVlpaT00NsUt/eB
NP/+E5X/fY60U87Z6vsJISLzfgOgj43FmJNHxgVXEnC0gUaD1mZHFxPX4/Eyp1kIITZssCXQF
UDnr0MzQm0RZ5+6AyMemY17bQmq14shNQ3z8JHo7THYJ03rdnzUmPFMePcbnMVr0JjN4WOFEG
JTWub91icjVnxeH+WFq1mz+G9++eQDckaNZeaBh6IoylZfW6PRMHLSVUBdpIzfW6PRMHLydP74/BMOP+fCbvsVrZb
0cy6l6M7rsO+wM9aRES9XIYTYCtETpsdzoNLhKC9EYjJiy/8/efYfHUV0NHP7fHV0j3ZbX/lq7V3VrbP8r+eZ6K2H6i/X4q2NSiWb9+SNeaA+qGmAaCwMYKKCmIBvd8aNWXRI7PlQKXp0SAGdLHqmOmVgdyNgTdY6WacOicgbQJh3HR82PIaVfGA+DXTmUpWuq1ZN7jRNl7Dn/TYkGXJx1KvLLaexmNnvUcCPIa7EN0xxFlBc2p6xAFNR6sULAj4zMqxP2MbQ+XNqUuXx+O+YpkZGV0aVxLvVSL2t7eVYtV5hJlbFz6zzoKkG3YKv2b2m+XT3umJxbmCF8rosWW6ZRgthoruA0fV1z/dO3Ksr5ifuX8WwQx9SGqP5oIx9t0RMvQ9zgdBq6GQC5cIntHzbUS8sdTA5sdvBGOoo2gC7JOqpiK7O+9oEBqH+wRFQLKDrY56+IBE1zVpXdezNIgENuQXeMrvNMJlIOGKM1VLYWvXxpWdS8l7oISTZYwy+iXUIfPiRIz2a99FOQd6HggpFkR+ysjqo1m1UrKmc2MXa1fULz8TNTPPWRXOZpHg/HBHvnT7mNqMqnD2F7H2w7hKfdiJLxHMn2dKYLDm5XotMo0xmqazlsFt4xuXqKJeZVu2U++gJTqPMtzlqE/FPrSD/mBoHKw/Chz+PkiUD6lSXNFrRQazCKzl3zrMaBOoGC/nxDbAeYJdXuMg0avm/cCl/HUv5sSJr3pJUsIFFoecPffDvd+5sBMKuU3bY21w4nmmTZSTmsapA/KETVHRsBuS09PtBXTGo9YbJuJQA1mcyPhHHNmn5qhYWa/11zbnD0m22ROzuHxPoS7nO3nyrtFBf5PqyWrOk0X+LwTTIeAWDzCpsx/vsuNyxgbaR2DO/TWpr9Kx5Zmwyi9F/hJ18bCKoTC8dEM17lw3yhumwuCzo6jJLUEWk3LaXT8nwFFrHUVj35hPmOyU+6Q9Q9avs4gs0yEuS8bp3cmz3OmBiEkGOSvsmEtSxYGRBfffJGUgbTewmyyPoQg8ojQU3b9QNrwbBHqJZdN23uMbUgjh/TxWS3/hzxPs3SWw4KRkqUEutYvA8P2JEeeQhE05BOJ7WJF3kT8cEbOa8Er3TfGvKZOFqVxFZoBK5gQHyTsnBJ/VENy1MBHrINPUdZJjUjx3nnhSPbZT8fvM/Ei03BuuwNLJb94rD/Y/yJyVpjGa+KsUzxHzb5zFzOjGmR6l77aLWpuVgI/4Nzi0lB1Bly9jzkZ38hDKpnoKwoRUl4rx6qYrEJ7x6edyLXC1T79uY+1Lfh75j5WuTKW6W1EyGhytRs6UvZpk13Y5WyqGZmXWJx4Bl1Bl3RtUfqvoyTEZIb5H4/n8WnY
vXLN3Qr3PLO03fNN5hnRmB1ZCdCoA1zBEQuLA5LPM5E8PzVXt/nEmvV9qlwQfgfHOPWPeFjYQ1VzRmwvZyQR/AbXn3iX30fhb2rhxf/KpcZo1PfkSJzvd/TelTBSIoQ3FeoFWIXOGWmyZnnTbzwh3DOqIWbAFTR7MuxQTIEu5aJgjIrhwHGf7yhHYuq8k0mBAMDPW/ZQMNhC6pwtfIcHxrkn+xzbQIRZlnVsjgaDtAkJbdZZ+xOJ9dmKv8lCyc/oN8k+PyPxKYgXuqVlQfDdqzJ/WAD3xnZX/Y2zrRUr9ZK84pjHNfAaDF8NfDkYi79ysBr4XGI7NmmD8QwMm8JfIgg2z6lFIC17EG5VNlyPx3HrTIZ7QOS+wqBCUdsGmmdYP5+sdhMzb+8DyZK72ddTfkAvhXc2s5j4wmNk0MUNJQtr3gdULfv0EbYQUuJ/Rmd2xeq6iXKRXxRJu5ukd3bxIJYV8ovNpHDQg7qjpOhygy3WUwdyNkjULEZCcsuT6rDmH2WMmapQEGUrUXtCYJvHeugZFBwsq0GUkyc40YzC7gQW08OsyQ1QaZeZaC26e9f+PPHDYJ6AHhlBWhrKjIOBBl2SqM4PDNzQCuyC3Y7VfNEYYUlo4GqG+ND0atDvumUzoNk/lRTI8G9M5jAwRNNSTJBv9DKp1yu8QEDD84+qMz1+bTOHtC4vLrApuAl9hp5s9lmBGVPENLMwbYIzTkNMJg2wVI5bnlO+F6Y85tZBhkggm1mEnNU7n4HOVYpHGNoK1rjFbOFnDkz3zMdJPa1J9utxfKSOHn4GxBw2PkCAGrT9n/NmT3vzvAVrnp/RFrOhrxgn5lqSpWqrfR2HvtUqt06DqYbGTHHdzz7b2fnzDTCGxdM2d5DDZ/dWNGqYsuXxD1VKeeQvOeA5AJe/TMCCKvpMXM/f4wQXcJeFj0tDKVaI/B8ZKjTO/zlqTAuIyTvYCtfH4EwrWyZefTBcDJKBQldF7mvb7WSw3X7BcG6FA+bHHkCH9cZIvVm1kfcnT0nhQEnY5MfCS0ycyQrHuDYGYrRDGpMFswyUr2LLNaLjgXH6ceq75M/7eEXlpjMcSAdzu7/+QgdI7xxYFVg5AYRDO4ylVq0hGPtiEB8OoaeM0yyj5KTCX+umDzfN7L62vt2izaPy6aiZmkKJoQuKKA8x7Bs5KnuvGKxzAfNI5pkNcNV3IQgT4MYI+CjsTW8cgnHFDQFMSbTr0W9mRwa4iDycU3Z0qz7jdwPAs3B6JHAHKVkAZYyCpgJfKUjG6q4K3k0NLqKGI5G0e8ZoF4V2A8E8Kqqy+8VE8Zi8eZPhmaE4OiHSGIfeqhiaTPrEsYM8KeLkzIq4lR9oNdBWg3bY9wHYZQyvdJN1LDOwt47VtfFmzkDhkz6mlzJ9kVvdBeE0jYZ5IMEKgr0vK5btYvQ4OX2Rqk+JwKRexHtvkxgTiC0+8fdPVmsELY3aMjVzEZVP7e3CL8x6mzh0sLSNOqq1F3yGlADTlCsEtPV0MJDoLAzq9TfgjvFgwEsUoPw93IfCRCFu8JxfAt+oTaMG74nwP0S

hmFQ9/iDZOy290aPC4dCfPrG3/j4n69RUDqS4vJRlI+fxOwDDsWbnTNE0cY5PR4OPeWnPH/XL
Rx/wS+ZdcAh/a6xzvnR0XhmzKbt3TdZcv7/EWltwVY8AsfI0bgmT8czc3e8s3bD7M3c7GvrkQ
iGrmGyOwbxGQkhhBBCbDlJoIUQYog0vvgUkeYmRvziN/3ub29qYt7HH/DZm69TVD6K486/mKz
crWtHNRhKRldwzFkX8N7Lz/PZv15n3x+fwKRd98Dp9iQdZ80vpOiM8+GM89HDISLNjYQb6ghV
raHzsw8JrFiGNb8Q5/hJOEaNwTaiDHtJGZbcPBSLlVhnO/6li+j68lN65s8l2taKoiqYXG7cU
3bBu/veuKftgq2gGFQVzddDtL0Nracbw9AxudzYikqwj6zAvF5sQgghhBCDQTGMQeuSkBazZ8
825s6dm+4whBDD3yZLVw90vIl2tNPw7GOE6qpp/+87aJ0ddEydScBmJ+Tz4+vqoLujnZ7ODnR
NA8CblcXoSdPw5gztnebNYejQULmKquVLiUbCALi8XrLyCvBkZeNwubBYbagmEyPHTyK3uCT5
8ZpGuL6WcG0VkaYGom0tRFtb0MOhxDG2EeU4x03EOW5ivE+2ArGOdgIrlxFYvpRQ1SqMWCxxv
Gp3YHK5QVHQgwE0vy+xTzGbMWdmo5hMaAE/Wk93v8/L5M3E5Haj2uwoqgqqimIyo1qtqHY7qt
0R32exoJgt8anpa+/CGwYYBoauY8Si6OEwesCPFgygh8OgaWAy9Z7LgcnhRHU6MTndmJxOVLs
DxWrtPa8KKOvu8A9CNfXkX4BB/G++gaHpGFoMIxyO3+mPRTF6/x9UTKbe56iCoWNoGoamxeMy
mVAt1njMFguq2QJqnzgNMGKx+GsRCWNEIut+X30eq1qsYDIlP+f1n28i3t7/1rR4zJFIImZ0P
f77Mpvj8VhtSb+jzXote69hrP1dro0/GsGIRjGi0fgxJhOK2YJq7X3+JnMi/qwDf4R70rSB/D
YGfbwRQogNGOQ/JmLYJ9CKorQAVYN4ylygdRDPl2470vPZkZ4L7FjPZ0d4Lq2GYRy+sQMGOt7
8yGXJvCHfUbH254aYRoz+x1zDiKdim3vu7YEC6obyEk1XYjGD8NBGFKcqKNkmxZppUpNmWemG
gU8nFjIMXQHsiqJ6TIrMxBJb7X1ftPXmluBAPosM+njTx3Abj4dTvBLrtjGcYoXhFW8usHRT4
40YmGGfQA82RVHmGoaR2vh5mNqRns+O9Fxgx3o+O9JzGSo76mu2Iz6vHfE5wY75vHbE5zRQw+
01GE7xSqzbxnCKFYZXvMMp1uFETXcA/ykGGgAAjjFJREFUQgghhBBCCCHEcCAJtBBCCCGEEEI
IsRkkgU71eLoDGGQ70vPZkZ4L7FjPZ0d6LkNlR33NdsTntSM+J9gxn9eO+JwGari9BsMpXol1
2xhOscLwinc4xTpsyBpoIYQQQgghhBBiM8gdaCGEEEIIIYQQYjNIAi2EEEIIIYQQQmyGYd//8
vDDDzfeeeeddIchhBj+NtDReB0Zb4QQg0TGGyHEUNnkeCMGZtjfgW5tHS59zIUQw52MN0KIoS
LjjRBCbJ+GfQIthBBCCCGEEEIMBUmghRBCCCGEEKIzSAJtBBCCCGEEIIsRkkgRZCCCGEEEI
IITbDsK/CLcRwFqqrIVS9BrPbg71iPGanM90hCSGE6BWuryVYtRqTy42jYhxmlzvdIQkhhEgz
SaCFSJOehd+x5NyTiba2AFB0zkWUXnwllqzsNEcmhBDC98N8Fp97CtGWJgAKz7iAssuuxpKdm
+bIhBBCpJNM4RYiDWK+Htbcdl0ieQZoePoR/Iu+T2NUQgghADS/j8q7bkwkzwCNLzyO74f56Q
tKCCHEdkESaCHSINbZQc+3c1K2hxtq0xCNEEKIvqJdHfTM/Sple7huxxijjVgs3SEIIcSwJQm
0EGlgyc4mY4/9UrbbSsrSEI0QQoi+LFk5ePfaP2W7vbQ8DdEMrmh7G98etnu6wxBCiGFLEmgh
0sDkdDPy2luxjej9MKaqjLjkalyTp6c3MCGEEJgcTsqvuAFb2cj4BlWl5BeX45o6I51hDYpYV
2fS1HQhhBADI0XEhEgT96SpTPvbe4SqKzG5PThGj0G12tIdlhBCCMA9cQrTXnuPUNUaVJcbx+
gxmGz2dIe11fRQAD0UTHcYQggxbEkCLUQaWfMLseYXpjsMIYQQ/bDmFWDNK0h3GINKCwYxYjH
0aBTVYkl3OEIIMezIFG4hhBBCiJ2EHgwk/VsIIcTASAIthBBCCLGTWDt9Ww+H0hyJEEIMT5JA
CyGEEELsJDS5Ay2EEFtFEmghhBBCiJ2EHognzlpQCokJIcSWkARaCCGEEGInkZjCLZW4hRBii
0gCLYQQQgixk0hM4ZYEWgghtogk0EIIIYQQOwm9d+q2LlO4hRBii0gCLYQQQgixk9AC/vi/pY
iYEEJsEUmghRBCCCF2EjKFWwghto4k0EIIIYQQOwk96AdVlQRaCCG2kCTQQgghhBA7CT0YxOz
JkDXQQgixhSSBFkIIIYTYSWh+PyaPV9ZACyHEFkpLAq0oSqmiKB8pirJYUZRFiqJc1rv9JkVR
6hRFmd/7z5HpiE8IIYQQYkekhwKY3B65Ay2EEFvInKbrxoDfGIbxraIoHmCeoijv9+673zCMe
9MUlxBCCCHEDksLBjF7vGghuQMthBBbIi0JtGEYDUBD73/3KIqyBChJRyxCCCGEEDsLPRTEml
eAHpAEWgghtkTa10ArijIS2AWY07vpl4qiLFAU5WlFUbLSF5kQQgghxI5F770DrcsaaCGE2CJ
pTaAVRXEDfwd+ZRhGN/AoUAHMIH6H+g8beNwFiqLMVRRlbktLy1CFK4TYCcl4I4QYKkMx3ujh
YLyImLSxEkKILZK2BFpRFAvx5PlFwzBeBzAMo8kwDM0wDB14Atitv8cahvG4YRizDcOYnZeXN
3RBCyF2OjLeCCGGylCMN3oohEnuQAshxBZLVxVuBXgKWGIYxn19thf1Oex44Iehjk0IIYQQYk
elBwMyhVsIIbZCuqpw7w2cASxUFGV+77brgNMURZkBGEAlcGE6ghNCCCGE2NHo0SiGrmNyutC
kjZUQQmyRdFXh/hxQ+tn19lDHIoQQQgixM9BDQVSbHcVmQw+H0h2OEEIMS2mvwi2EEEIIIba9
tQm0arWhyx1oIYTYIpJACyGEEELsBPRgANVmQ7XZ0MOSQAshxJaQBFoIIYQQYiegBYOodgeK1
YYekincQgixJSSBFkIIIYTYCcSncNviU7hlDbQQQmwRSaCFEEIIIXYCejCAYrWhWCwY0SiGpq
U7JCGEGHYkgRZCCCGE2AlogfgaaEVR4uugQ7IOWgghBkoSaCGEEEKInYAeCqBYrACoNrv0ghZ
CiC0gCbQQQgghxE5Aj0RRLRYAFJsdPRRIc0RCCDH8SAIthBBCCLEz0GIoJhMAqtmCEYmmOSAh
hBh+JIEWQgghhNgJ6LEoqPEEWjGbMGKSQAshxEBJAi2EEEIIsRMwotHEHWhM5nhCLYQQYkAkg
RZCCCGE2AkYmpZIoBWTCSMWS3NEQggx/EgCLYQQQgixEzCifaZwSwIthBBbRBJoIYQQQoidgB
GLopjiH/0Us1nWQAshxBaQBFoIIYQQYidgxGLJU7ijkkALIcRASQIthBBCCLETMGKxxBRuVBO
GJlO4hRBioCSBFkIIIYTYCeh9qnArJjNGVBJoIYQYKEmghRBCCCF2AkYsgmIyA2uLiMkUbiGE
GChJoIUQQgghdgJGNLauiJgk0EIIsUUkgRZCCCGE2AnEq3DH70BjMmHEtPQGJIQQw5Ak0EIII
YQQOwEjGgWZwi2EEFtFEmghhBBCiJ2AEYuhmNcVEdMlgRZCiAGTBFoIIYQQYidgxKIoqvSBFk
KIrSEJtBBCCCHETkCPrWtjhapiaLIGWgghBkoSaCGEEEKInUB8CvfaNdBmuQMthBBbIC0JtKI
opYqifKQoymJFURYpinJZ7/ZsRVHeVxRlRe+/s9IRnxBCCCHEjsaIRiExhVuVImJCCLEF0nUH
Ogb8xjCMScAewMWKokwCrgE+NAxjLPBh789CCCGEEGIrGX2mcMercMfSHJEQQgw/aUmgDcNoM
Azj297/7gGWACXAscBzvYc9BxyXjviEEEIIIXY0RjSamMKNKgm0EEJsibSvgVYUZSSwCzAHKD

AMo6F3VyNQkK64hBBCCCF2JIYWS6rCrcsaaCGEGLC0JtCKoriBvwO/Mgyju+8+wzAMwNjA4y5
QFGWuoihzW1pahiBSIcTOSsYbIcRQ2dbjzfp9oI1YZNCvIYQQO7q0JdCKoliIJ88vGobxeu/m
JkVRinr3FwHN/T3WMIzHDcOYbRjG7Ly8vKEJWAixU5LxRggxVLb1eKNHoyimtVW4pQ+0EEJsi
XRV4VaAp4AlhmHc12fXv4Aze//7TOCNoY5NCCGEEGKHpGmwtoiY2SxroIUQYguY03TdvYEzgI
WKoszv3XYdcCfwqqIo5wJVwCnpCU8IIYQQYsfStwo3qgkjFEpvQEIIMQylJYE2DONzQNnA7oO
HMhYhhBBCiJ2BEY2ta2NlliJiQgixJdJehVsIIYQQQmx7hhbrswbajBGTBFoIIQZKEmghhBBC
iJ2AEYuuWwNtkj7QQgixJSSBFkIIIYTYCeixPlO4TSa5Ay2EEFtAEmghhBBCiJ2BpkkbKyGE2
EqSQAshhBBC7ASSqnDLGmghhNgikkALIYQQQuwEjJQp3LIGWgghBkoSaCGEEEKInUA8ge4zhV
sSaCGEGDBJoIUQQgghdgKGFutThVumcAshxJaQBFoIIYQQYgdnGEbKFG5diogJIcSASQIthBB
CCLGj0zRQVRQ1/tFPMZtlCrcQQmwBSaCFEEIIIXZwhrZu/TMAqik+pVsIIcSASASAIthBBCCLGD
06N9WlgBilmKiAkhxJaQBFoIIYQQYgdnxKIo5nV3oBWTGUPWQAshxIBJAi2EEEIIsYMzYtp6C
bRM4RZCiC0hCbQQQgghxA7OiEUTLawAkD7QQgixRSSBFkIIIYTYwRmxaFIRsXgfaEmghRBioC
SBFkIIIYTYwRnRWOoUbkmghRBiwCSBFkIIIYTYwRlaDEXtU4XbZI5P6xZCCDEgkkALIYQQQuz
gjOj6VbhVDE1LY0RCCDE8mTd9iBBiawVWLSe4chmq04VrwmSseQXpDkkIIQCINDfhX7YIPeDH
MWYczorx6Q5JbAPxNdDr3YGWKtxCCDFgg5JAK4oyHdi398fPDMP4fjDOK8SOoOe7b1j0s+PQ/
D4APLvuyfj7nsBWUprmyIQQO7tQfS0rfnMh3XM+B0B1upj8/D/xztwtzZGJwWZoWlICjckEmo
ZhGCiKkr7AhBBimNnqKdyKolwGvAjk9/7zF0VRLtna8wqxI9ACfqr+cGsieQbo+eZLeubPTWN
UQggR5/t+biJ5BtADfqrvvQUt4NvIo8RwZETXq8KtKGAyY0RlHbQQQgzEYNyBPhfY3TAMP4Ci
KHcBXwIPDcK5hRjWYn4fgeWLU7aH62vSEI0QQiQLN9SlbPMvW4Tm82FyutMQkdhW9PX7QNNbi
VuLAdb0BCWEEMPQYBQRU4C+VSi03m1C7PSs2bnkHnViynbXpGlpiEYIIZK5JkxJ2ZZ7zElYsn
PTEI3YpmLJbawAFLPcgRZCiIEajAT6GWCOoig3KYpyE/AV8NQgnFeIYU8xmSg680Kyf3QMEF9
fOOqGu3BPn5nmyIQQAtzTZjL6pnswueJ3m7MPPYris36ekmiJ4U+PxVDU5I998VZWUkhMCCEG
Yqv/QhqGcZ+iKJ8Ae/duOtswjO829hhFUZ4GjgaaDcOY0rvtJuB8oKX3sOsMw3h7a+MTIt0cI
0cz7v7HCdfVoFht2EvLpWCLEGK7YHZ7KDzjfLIOPAw9HMJWUorJ4Ux3WGIbMGJRMPVzB1p6QQ
shxIAM1lfM84GGtedTFKXMMIzqjRz/LPAw8Px62+83DOPeQYpJiO2GyeHEOUZawwghtj+KomA
vLU93GGIbM2Kx5Crc9K6BljvQQggxIFudQPdW3L4RaGLd+mcD2OAiT8MwPlUUZeTWXlsIIYQQ
Qmza+n2gQe5ACyHElhiMO9CXAeMNw2gbhHP9UlGUnwFzgd8YhtExCOcUQgghhNipbegOtC53o
IUQYkAGo4hYDdA1COd5FKgAZhCfDv6HDR2oKMoFiqLMVRRlbktLy4YOE0KIrSbjjRBiqGzL8W
b9PtDQW0RMqnALIcSADMYd6NXAx4qivAWE1240DOO+gZzEMIymtf+tKMoTwL83cuzjwOMAs2f
PNgYasBBCbC4Zb4QQQ2VbjjeGFoP1qnBjNvf2gRZCCLG5BiOBru79x9r7zxZRFKXIMIyG3h+P
B34YhNiEEEIIIXZ6RrSfKdyqSe5ACyHEAA1GG6ubN7ZfUZSHDMO4ZL1tLwMHALmKotQSL0J2g
KIoM4gXIKsELtza2IQQQgghxIaKiEkVbiGEGKjBamO1MXuvv8EwjNP6Oe6pIYhFCCGEEGKnE5
/CvX4RManCLYQQAzUYRcSEEEIIIcR2LF5ETPpACyHE1pIEWgghhBBiB6f308YKSaCFEGLAhiK
BVobgGkIIIYQQYgP6XQNtMskUbiGEGKChSKAfHIJrCCGEEEKIDTCi0f7XQEsVbiGEGJCtLiKm
KMo44EqgvO/5DMM4qPffz27tNYQQQgghxJbb4B1o6QMthBADMhhVuF8DHgOeALRBOJ8QW8XQN
KJtLahOF2a3J93hCCF2MrGebvRgAEtuPooqpUbE9sGIxVDMyR/7FJMJPSoJtBBCDMRgJNAxwz
AeHYTzCLHVgtVraHj2z7S88QqO0WMpv+omvLP3RFFkKb4QYtsydJ2uOZ9TddeNhGqrKDj5DAp
/cg72EeXpDk0I9GgU1WJJ2qaYTBjRSJoiEkKI4Wkwvhp/U1GUixRFKVIUJXvtP4NwXiEGRAuH
qXnwDhqefZRYRzs98+aw6IzjCCxfku7QhBA7Af+ShSw+6wR8C74l1t5G3Z8foO6Jh9BljanYD
hiRCMp6CTTSB1oIIQZsMBLoM4mvgf4CmNvnHyGGVKShlpY3XkvaZkTCBFYuTVNEQoidSWD5kp
SCTE1/fZZIU0OaIhJiHSMaQTGtN4Xb3H8RsXB9LcHVK4cqNCGEGFYGI4G+GphuGMYo4Bnge+C
kQTivEAOi2uyYPRkp201OdxqiEULsbEyu1LHGkpWDarOnIRohkunRaD9roM3okdQp3M1/f4m6
px8eqtCEEGJYGYwE+neGYXQrirIPcBDwJCBrosWQsxWVMPK3tyVtc0+fhWvilDRFJITYmbgmT
8c5flLStpG/uwNrXn6aIhJiHSMaSU2gzeZ+10BHWpuJtrYMVWhCCDGsDEYRsbWVt48CnjAM4y
1FUW7b2AOE2FZyjjwee+lI/IsXYi0oxD19FrbC4nSHJYTYCdhLSpn4+F/p+X4u0bZWXJOm4Z4
6I91hCQFsaAq3qd81+tHWZqJtrUMVmhBCDCuDkUDXKYryZ+BQ4C5FUWwMzp1tIQbM7HSRsfs+
ZOy+T7pDEULshOyl5dhLpeq22P5scAp3OJxybLS1hVhH21CFJoQQw8pgJLqnAO8ChxmG0QlkE
y8qJoQQQgghtgMbLCIW6SeBbm8l2tE+VKEJIcSwstV3oA3DCACv9/m5AZCSo0IIIYQQ2wmjvz
vQZku/a6Cj7W3EujsxdB1FlUmFQgjRl4yKQgghhBA7uH6ncJstKVW4DV0n1t2FarUR6+4cwgi
FEGJ4kARaCCGEEGIHZ0Sj/U7hXj+BjnV2YHK5sWRlE22XddBCCLE+SaCFEEIIIXZwm9vGKtrW
gjkjA5M3k5gk0EIIkWIwqnALIYQQQojtmBGLpSTQqtmMvl4RsXgCnYnqcBFtl1ZWQgixPkmgt
0OxgJ/gymVo3V3YykbhKBuZ7pAGRPP7CKxchubrwV4+GvuIskE9f8zXTXDVivj5R1ZgLykd1P
OnW6y7i8DK5eihAI5RFdiKRqQ7JLETiba3EVy1DEPXcYwehzUvP90hbZZIeyuhVcsxdAPH6LH
bRdx6NEpw9QoizY3YCotxjB6LYjKlO6wBC1auIlxThTkrG8eY8ZjsjnSHJLaAvoEp3EaknzvQ
ngxUh1MSaCGE6Ick0NuZaFcntX+6l/onHwLAnJHFxKdexTtztzRHtnmi7W1UP3gHjS88AYAlJ
5eJT72GZ9rMQTl/pK2F6vtuo+nlZ+Pnz81j0lOv4Z66y6CcP90izY1U3nk9Lf98FQBrYTETn3
wV96SpaY5M7AyC1ZWsvOoiur/+HwDOiVMY/9CzOEePTXNkGxesXsPKKy+i+5svAHBNmsq4Pz6
T1rj1aJSWN15l1XWXxu/8Wa2M+8Pj5Bx5HIqipC2uger66nOWXHAqmq8HFIXSS6+h+NyLMbs9

6Q5NDJAR20ARsZQp3G2YPF5Uu0OmcAshRD9kDfR2xr9oQSJ5Boh1dbD6xt8Q6+pMX1AD4Fs0P
5E8A0TbWqm8/XfEfD2Dcn7/wvmJ5Bkg2tpC5d03o/l9g3L+dOv5fl4ieQaINNZT+6d70MKhNE
YldhYdH7+fSJ4BAkt+oOWN19IY0ebp+Oi9RPIM4F+8kNY3/57GiCC4ZkUieQYwIhFWXH0xocr
VaY1rICJtLay45uJ48gxgGNQ8eAeBpYvSG5jYIpvbxirS1ozJ48Xs9hBpaxnKEIUQYliQBHo7
E2mqT9nmX7SAaFdHGqIZuEhjavw9332NNkhfAITra1PP/+2cYfMFw6YE16xM2db9zRfEurvSE
I3Y2fRNQtfq/OxD9N4kcHvVN+lfq/OzDzE0LQ3RxEVbmhPJ81p6wE+krTlNEQ1crKOdcHVlyv
ZwP+O82P4ZsQ1N4Y4mbYu2NGP2ZmDyZhBtlQRaCCHWJwn0dsbWz3pez6w9sGTlpCGagbMVp65
3zthrf8xZ2YNyfns/68Ez9z4Q8zB5fTbFOXZCyras/Q/FkpGVhmjEziZznwNTtuX86GhU8/a9
2idzn4NStmX/6Ki0rje2Fhaj2uxJ20yeDKz5RWmKaOAsOXk4xk1M2T7YdS3E0OiviJhiNqdO4
W5vxezxYvZ4ZQ20EEL0QxLo7Yxr0jTKr74l8UfONqKc0TfdjdnjTXNkm8c9dQalv7oOej+42k
eOpvyqmzE5XYNyftfUXRhxyVWgxv/XtY8eS9nlv8Xk2DGK2nimz6L4vEsSz885YTIlF1yGarW
mOTKxM8jc9yByjz4h8XPGvgeRc+TxaYxo82TufzA5Rx3f5+dDyDn82DRGBI5RYxh7/xOYXG4A
TN5Mxv/x6WFVFNKSlc3YOx/GWhBP+hWrldE334tz/KQ0Rya2hN7vFO7UImKarwfV4cTk8RLrb
B/KEIUQYlhQDMNIz4UV5WngaKDZMIwpvduygVeAkUAlcIphGBuduzx79mxj7ty52zbYIaZHo4
QqVxHr6cZeWo41ryDdIQ2IHo0SXLMCzefDXjYSa+7gVsPVI5H4+QMBHGUjseTkDer5000Lhwi
tWYUeCmIrG4U1e8e4uz4MbLKy04443qxP8/sIVq6KV+Eur8DsHR5f3ml+H8E1qzCM7SvuYNVq
oq0tWPMLsJeOTHc4WyTc2EC4vhpzRiaOkWOGZSXx7dCQjjeGYfBFRSaTX3wzqYhdqKaSusceZ
OaH666z4MRDyD36RExud8o+IcSwNHwqVw4T6ZyX9yzwMPB8n23XAB8ahnGnoijX9P58dRpiS5
twUwP+xQvQurtwjBmPJTs33SEBoEfC+Bf/QHDNSiw5ubgmTd1gYqxaLLjGbbs7FKrVimv85G1
2/nQz2ey4Jmzfzy+wYin+pYviv4tJ07CXlqc7JNGPcENdfDzx+XCMnYBrwmQUdeMTj0wuN+7J
04cowv6FeuPW18Y9ccomK1ebXG7cU9Ibd38c5aNxlI9OdxhbxVZYhK1w+5p6Hqqpwr9kIXo4h
Gv8ZJz9TDUX66wtILb++6i/KtxaMIhqs6Na7Wih4FCGKYQQw0LaEmjDMD5VFGXkepuPBQ7o/e
/ngI/ZiRLocEMdy359Hj1f9xbyMZmY9NRrZO13cHoDA9re/TfLLzsn8XPOEcdScet9202CL4Z
Oz/fzWPTTHycqn9tGlDPpmb/hrBiX5shEX6G6apZdfCa+Bd8CoFgsTHr2dTL33C/NkW1cqK6a
pb/4Gf4fvgPicU9+7h9k7LFvmiMT24vg6pUsOvckwlVrAFCdLqb85V94ZsxOc2TbLyMaSZm+D
b1VuGPJRcT0YADFZkOx2dAlgRZCiBTb2xroAsMwGnr/uxEYXnOXt5Lvh+/XJc8Amsbqm68i2p
HeNUjh+lpW3/ibpG1t/3kDv7Qy2enosRj1zzyS1DYsXFtF52f/TWNUoj++Bd8mkmeI34GqvON
3RLfziu6++fMSyTP0xn3nDcR6utMYldiedH75SSJ5hnh189o/P4i+3lpesY4ejaCYLSnbFbMZ
I7peAh0KotpsqFZJoIUQoj/bWwKdYMQXZ/e7QFtRlAsURZmrKMrclpYdp8VCrJ9WVeHaKvSAP
w3RrKMF/MQ6U2Prb5vYsRmREIHlS1K2BytXpSGaoTFcx5toe1vKtlBVZdrHk03pr+pvqGoNmn
/7jlsMnVD1mpRtwZVL0cOhNEQzuLbVeGNEYxtMoFOncAdQrTZUqxU9HCJdtXKEEGJ7tb0l0E2
KohQB9P6734aZhmE8bhjGbMMwZufl7TgFpJwV42C99Ul5x56CJb8wTRHFWQuLyVhv2qdiseAY
PTZNEYl0MTndFJx8Rsr2rP0OSUM0Q2O4jjf9VUrOP+G07b4oobOf9f95J5yGNW9wixGK4Stzr
/1TtuWf/NNh061iY7bVeLPhKdxmjPUSaD0UQrXb42umVTWlSrcQQuzstrcE+l/Amb3/fSbwRh
pjGXKuydMZ/6fnseYXgqqSd+wpjLjoN6iW1G+Nh5LZ7WH0TfeQedDhANjKRjLxiVekaMtOKue
IYym58DIUqw2TJ4PRN9+Ld/Ye6Q5LrMc9ZQbjHnwaS24emEzkn/xTis7++XZfQdk9ZRfGPfjU
urhPOYOiMy/c7uMWQ8czc3dG33Y/Jm8mitVK8XmXkHfMSekOa7umb2wNdJ8p3IamxZNtS7x1o
mqzo4cCQxanEEIMB2krIqYoysvEC4blKopSC9wI3Am8qijKuUAVcEq64ksH1Wol9/Af4521O1
owgLWgGJPNlu6wAHCOncCEh54h0tyE2e3e4VpHic1nKyym/IobKTz9XBSzGVtRSbpDEv0w2R3
kHXMiGbvtjR4OYS0sHhb9xE0OB3nHnETGbvsMq7jF0DF7vBSdfg7ZBx6GEYthKyrpNzkU6xix
DUzhNpkwYjEMw0BRlN71z/ZEtW7FbkcLBjFnZA11yEIIsd1KZxXu0zawK/0lp9NsKKZYxgJ+f
PPn0vnph1gKCsna50CcY/u/oxyqrqTzq08JLFtCxu574501+Hcb9UiEngXz6PzkA0wuD5n7HY
R70rRBv44YHIrJJK2rhglrQfqWgATXrKTzi08IrVlFxt774521B2ZvxmY9drDjDlatpvvrL+j
59muc4ybh3WMf3BOnDOo1xNCSL+82nxHZwB1oVU0UElOsVrRAANVuT+xXbXb0oBQSE0KIvuQr
251U58fvs+yXZyZ+rsvJZcpf/5PSiijc3Miyy87B9/08ABqeeYQRl1xF2SVXD+o3/t1ff8GiM
4+D3mIltX+6hymv/EeSaCGGqVBtNYvOPZlw5WoA6p/+E6NuvJviMy8c8lhiAT/1TzxE40tPJ7
a5Z8xm3ANP4SgbOeTxCDHUjFh0g3+z49O4I2C1ogf9qHZHYl+8ErdM4RZCiL62tzXQYghEO9q
puufm5G1trUktb9YKLl+SSJ7XqnvsfkLVlYMWjxYOUfvYfYnkGUDz++j89MNBu4YQYmj5lyxM
JM9rVd/3e0L1tUMeS2DpDzS+8lzSNt/8uQSkFZ/YSejRjSTQFkuiErcWjE/hXku12dDkDrQQQ
iSRBHonZMSiSX1819JDqS1A+uuraUSj6LFoyvYtpmnE+ulNG+vpGbxrCCGGVH9jhx4KgBYb+l
iiUdC0fraHhzwWIdLBiEZQTBu5A937ftWDAdQ+tVdUmw09KHeghRCiL0mgd0LWvAJKLrg0aZt
iseCeMiPlWMfY8VhycpO25Rx53KCufzU5XZSce3HyRkUh64AdtzWSEDs61/hJmFzupG2FPz0P
W9GIIY/FOWY8Geu1PrIWFG2w7oMQOxpjY3eg+/SC1oIBlD53oBWrDT0kd6CFEKIvWQO9k8o77
v8wOVw0/OUJrEUjKP3Fr3FNTl1v7CgdyaTn/kHDs4/S8+035B5zEnnHn4rJ4RzUeDIP+BFj73
uc+icfxuTNYMQvLsczffagXkMIMXScY8Yz+S//ou6JhwgsX0z+ST8h95gT01It2ZqTR/k1t9L
y+st0fvoBrqkzKPrJebikFZ/YSWxqCrcRic8q0wMBVGufO9BWG5rcgRZCiCSSQA8iPRbDiEUx
9SnAMVgMXSfc043JbEbTNMwWK2bHll/HmptP4U/OIfe4k1Et1qQ/mOtzT5pGxe//iB4KYvZ4B
3wtLRRCMZtRN/LB2ZKRSf5x/0fOj44C1bRNXkMhdjRrK+Yq6pZPJgoFAlhsNky9fZYj4TCKom

```
DpbR1lxGLosWhvMaEQJqdzs6/tmT6Lcfc/gR4KYfZ4tjjGzaVHIhgYmPoZzzxTpuOaNJVo26+
xeDOTpqkKsaOLT+Huv5e6uraIGPFlFklTuK02qcIthBDrkQR6EBiGQc+3c6h/6hHCddUU/vQ8
sg46DOsg9Upunz+P4A/zIRL/YNv6nzdQLBbyzjifvAMO3apk0+zavA+1qsWCakntIbkx0bZW2
j96l8a/PImteATF51yMZ9buif6S/TE53RvcJ4SIC1atoeVfr9H+zr/w7r4PhaeeiXOAd1Ob62
r57M3XefelZxkzdQbHX3gJLXW1vPrwHzCbLZx++TVUeDw0vfQUnhm74vvhe/wLvyPniB9jHzW
Wukf+gGfXPSk87Wxc4ydt8DpbMnYMlBYO0T3nc+qeeAgjGqH4vEvI2HN/zC5Xciyqim0I2gQK
sb0xYtGNrIHuM4V7vTvQiiTQQgiRQhLoQeBf9D0//OSYRBGOlVdfzKgb7qL4rJ9v9bkDNVXU3
X8btvxCnGMmUHnXDYl93V9+ivrkq+QfdNhWX2dbaPn331lz81UA+BZ8S/t/32Haa+/hnrpLmi
MTYviK+XpYfcvVdH70LhCvdt3+4dtMfeU/2Ao3ry9uLBrltYf/wN8ffRCA1YsWUj5+En++4ar
EMYfudwDhpx+m8PRzqH34HiLNjYnrZR1wKOasbBqff5z2D95m6qvvYC8uHeRnuvl65s1h8Vkn
Jn7u/voLJj75Ktnb6dgoxFDTI5tqY9U7hTsYREmawm1FkzZWQgiRRIqIDQLfD/MTyfNadX9+g
Ehr81afu3vJQrxTdyFYuZquLz5J2d/2xqtbfY1tIdrWQt3jDyZtMyIRevpplSWE2Hyh6jWJ5H
mtcE0VgZXLN/scTbXVvPHkI4mfJ87enW8+TD5nHgZ6MIDJ5Uokz2t1fPw+3lm7AxCpryU4gGt
vCy39jIMNLzyOoetpiEaI7c9Gq3BbzImq+VrQj9q7fANAsVrlDrQQQqxHEuhBoFqsqdtsdhS1
//VGAzq32Rz/Ztgw+l2zpzpd/TxqO2Ay9x/vRtZaCyE2TTGZoJ9lEKp586dJm1QT5j4fkqPhM
Lb1aioYa6/R35ILkwmjT9/2dBQG62v9at+JbRtZLiLEzsSIRWEDa6AVkxkjEm/pFr8DvW5siB
cR8w9JjEIIMVxIAj0I3NNnYc7MStpW9pvfYcnO2epze6fMoGfVcjzTZ5Kxxz5JfwAVi4WcH5+
01dfYFiyZWZT95vqkbeaMLDwzZqUpIiF2DPaRFRScfk7SNs+sPXCMHb/Z5ygoK+fMq29M/Lx8
/jx2Pfgw1D4FwWpCYSz5hUQaG3Cut8Y5/7j/o+Oj94D4+JfudlC5x5yE0nedtapSdMb5G623I
MTOxIhuag10fAq35vel9oEOyBRuIYToS9ZADwLnmPFMeektOj5+j3BDHdmHHIln5m6Dcm57fi
FlV96Ef+lC1EiEMXf+Cd/Cb8Fqw3vAoeTsvs+gXGdbyDrgMCY9/0/aP3gba0Ex2QcemvYP2kI
MdyabndJLriJjt73p+vIT3NNmkrn3AQMqWqgoCkeccQ4jxozj6/f/Q/n4icw68FAe+M+nfPH2
G5jMFiYcdjSlJ51G56cf4Jm1O7GuToIrl5Gx576YvVkoFgsFp51N5j4HYM3L34bPeNM802cx9
ZV3aP/gbXQtRs4hR+GZLl/WCbGWHolsYg30uj7Q6np9oGNtrUMSoxBCDBeSQA8S14TJuCZMHp
RzhZsbiba1gqJg5BaA1YJn0jT8BvgiYRyz9sBsNuMydKIdbZv1wVkLBYm2tmBye7Csd7d8k48
NBgg31GHEYigmE5bsXExuD5HmRkwOB5bs3H4fZ3a5yNrnQLL2OXCT14g0N6LHYtgKizFiUSIt
zZicTixZW34XP9reihYMYs0v3OZVgIUYSrb8QvKOOZG8Y07c9MEb4M3KZo+DD2PG1OlEA366Q
kG8GZkcccY56NEoFhRMmVnkHX8aRjSKJScX1WJB8/cQ7eigbJeb0X0+TOstIwk31gPGZhc060
+kpQk9GkV1ONADAUwuJ5rPjyUnF5PDiRYOE21txuR0YcnKBkXBWlBE3gmnY/J6sebk9Xv3WQv
4iba3YfJ4sWRkbnF8WyolbiGGSLwK9wamcJvN69pYBfyY3eu6c6g2G7r0gRZCiCSSQG9Hom2t
tH/yPsHlS2j863OgwJg7H6b1s49Yk5PPM48/TFd7GwedeBq7HXIYuV0dhJ56iFHX30n2gYclF
f7oK7ByGVV/uJX299/CMWY8FTfdg3f3fTZreqN/+WIq77yBzk8/xDl2AsXnXIwlv4DWt/9J6z
/+irWgmFE33k3Wfgdv8Pobo/l6aH37n1TdcxNaIEDRWT/HkptP5e2/xV5azuib7iVz7wM2+Ie
/P3okQsenH7Lm5quINNWTd8LplF50OfayUQOOT4gdVXDNSjq/+pzOcIj3v57DW3//K96sbI67
4JfM/e977HHoEexZWkrz/bfH30fHn0bBaWdTdfeNdM/5HPe0meQdewrN//grI6++GeekabS8/
jI1D94JGIy4+EoKTjwdS07/X7D1Jxbw0/7Ov6i883q0nh7yjj8VVJVoRxvOinH4fvie0kuvpu
HZx2h963Xs5aMZc/uDdM/9irrH7kcxmSk47SycFePJ3P9grLnr7oz7ly2m8q4b6fzkfVyTpjL
6xnvwzt5jG7yy/QusXkHN/bfT+s4bOEZWMPqme8jYc7+t6uEtxOaKT+HecAKdmMId8KPa192B
jveBlgRaCCH6kr/c25GOLz4hUltN3eMPonV3krnnftQ9eh9thcXcc/N1tDbUEw2HefelZ/nu0
49odLhQnG6WXXQGvh/m93vOmK+HVddfTvu7b4KuE1y+hEVnnUhw5dJNxhPt7GDFFT+n8+P3Qd
cJLFvMmluuJrh6JXpPN0YsRriumqUXnoZ/8YItes7d337Nymt+SbStFT0YoO7R+4g21mP2ZhC
qXM3ic0/Gv/SHAZ3Tv3ghSy88jXBdNUYsRvOrz1P7+B8THxCE2NlpwQD1LzxJYNliPluwgH++
9BzRcJi2xgaeuuW37Hbw4RQqUHPlL9a9j157gfqnH0bz9YBh4Pt+HrWP3EvGbnux+JyT8H8/j
8rbrkXr6ULr6abqzuvp+PyjAcXlmz+XFVf8nGhrC3o4RNNfn0W12fDNm0Ng+RJiHW2suu6yeG
0wTSPSWE/n5x9Rfe8taL4eYl0d1D12P+GGWjo/+2/ivNGOdpZffj6dH78HhoF/0QIWn3MSwcp
Vg/zK9k8L+Flz23W0vvU6aBrBVctZfM5JBJYvGZLrC6FHNzKF22ROdBLRg4HkNlY2G5ok0EII
kUQS6O1I9zdf0DP/m8TPjjHjCaxYSmVjY8qxX/znX3S2t+E+5iQwjA1+EAvX19I95/OkbUYkT
HD1yk3GE66rwf/D90nbNL+PWEcbjjF9ChYZBoGVyzZ5vv70/ZC7Vscn7+Pdda/eC8Y/bA5EYO
VS6FMhGKD5by8SbWnaohiF2NFEGhswWSz4wmHef/uNlP0dLU1kGHrK+6j93TfJ7LMkI9ragup
wYkQi+JctTjlP89/+MqC4utYbqwA6PnoX7+570/7B22TufQCBpT9gKx0JxNc+d331WcpjfAu+
pevLTzE0DYBwXTWBJclfxGm+HoJrhiaBDjfWx5P3PoxodMBjmxBbytjoGmgzem8Vbi2QugZaD
0kbKyGE6EsS6O2IJTsXa35R4mcjEkGxWPC6U1u05BWPwGq1EaurAsCcmdnvOU0OJyaPN3W7N2
OT8ZicLlS7I2W7arOn9L02b+F6QltpWco2a1EJ0T49tE3egZ27v1hsxSUojtTnIsTOSHU40AJ
+zHqMguIRKfsdbg9RUpd4WAuT35uwrn3W+p0IAJzjBlY00FaUum7aVlhCtLUFa0ER0bbW+If7
3v7OkdbmftdaWwuKMOfmJaasmlzupKRgLbM3dWzcFkwOR7+vjylj0+OwEINBj0Y2PIXbZIq3y
wT0UCC1Crf0gRZCiCSSQG9Hcg49EnvFWMy9xWVa//06RWdeSEksSmnF2MRxZouFw047k5KSEX
T/81VcU6bjnrpLv+e0l5Yz6nd3JG3L/tHRuNZrS9PvY8tHUX71zcmPPfgI7CPKaX3rH4lt7um
zcE2evtnPs6/MvQ/E2udDs2p3kLXfwfR8+zUA3r32xzVp6oDO6Zo8HfeM2es2qCqjrr8T61YU
```

JBNiR2IrLCZjr/3JHDeJ0087A3OfInsjKsYSCQZZ3tqKY9rMdQ9SVUovvZrWt/+Z2JR3/Kl0f
P5fsg46HPfk6UlJosmbSf4Jpw0orozd98FWWp74WbHayD70KLrmfE7Rzy6k9a3XKb3sGlrfjo
8/wRVLydjnoKQvCc3ZOdhKy8k74vjENnv56JSxLP+knw5ZVwBb0QhG33h30rbM/Q/FNWHKkFx
fCCMaRdlQr3iTGT1RRCyYnEDLHWghhEihGOtN0RtuZs+ebcydOzfdYQyawKrlhGqqiNTXgKri
GDuRaGsTXYZCVVsb/nCI7IIiMnNyyGxqwGa345k6A1tx6QbPqQUD+BcvILhmFZbcPNyTp2PNK
9iseGJ+H77v5xFYuQyz24M5Ow/FZsVkthCqqcTkycA1ZTr2fu4cba5g1Wr8ixegh8M4x00CXS
OwbDHmzCxck2dgKyza9EnWE2qoxf/DArSeLhwV43FNmiqVuMWmbLKq3o403uiRML7FCwl3tNE
YClPbUI/F6cKdlU1bQx25hUWUZedgbmnECIVwjBmPrWw0waULCdVWYfZmgaqgmM24J8/Aml9A
YNVy/EsWggGuiVNwjtn83tRrBasr8S/6Hs3vw1pQSLSjHbM3Ey3gw5qbj2PcJEJrVhBavRJzd
g6uKTPQOjvoWTAPIxrDVjwCW/GIlGvH/D34Fy0gVL0Ga34RrsnTBtT6a2tp4VB8HF61AktOLq
7J07HlFw7Z9cV2Z0jHmxXXXILZ4yH74CNS9jW9+jyOinGUXnwl3+w9mZFX3YS1IP7/ZqSthTW
3XstuX23ZMi0hxHZh01WDxYBIFe5tLNzYQKSxDnNWNpacPEJVa0BRUJxu2jtaUX0+zGYzmZOm
oHd1EW1uit+BHjmaYE0VoWgEe3EpWaEQHocDw+miNeDHabbgLynDUVxCzNdD4NMPe6csWkDXc
IwcjcnhBOLTuL2z9sA7K7nirBaJ4F/4HbHuTmylI3H182HX7HKTudf+ZO61f2JbrKcb/9IfsJ
aUYXK6CFWuIlxXg2vC5KT2F4GaSsLVlQC4J0zG0s+H1WhHO7GuTpxjJmAfWZFIct1TZmzV624
vGoG9aASGrhOsXIV/8QJsJaVJVXlDtdVEW5ux5BVgL9nwFxBCDDdaKEiocjV6NIrPZicUi2EE
A/i7OikoH0WGx0ugsZ5oazOqNxNPQQnTC4sJazHsAT8VU6fTGovRHgqRN6IcazCAFggQqlxFL
BjAOXEqnt73aLSjnVBNJbGuDuwjK3BWjEOPRAiuXkHnnM9RnS4IhbCPqkh6/22IrbAILeAn1t
mOyeXB5HQT6+nGPWkajpEVAFh32Q1H+WjCDXUEVy3HkpVD3o9P2eiXZGaXh4zd9iZjt72JtrU
Qqq0m1tmBY2RFYmqrHgkTrFyFHg7jKB+Fuc/ykXBDHZGmBszZuTjKRm70ORi6TqhqNbGuzvi4
k1eAyWbHu8tueHfZbZOvgRCDzdjoFG4zRqTPFG77enegZQq3EEIkkQR6G+qeN4dlvzyTSFMDJ
RdcRmDFUjo+ehfr5OmoZ/4c06cf4H/rdWxFI9DOv4Tq+25D6+nGkptH2VU30/riU2QfchSax0
394w8Rrq9BdThxnn0Rf/rvhxx/1vm8/dyT7D9rFoHbrkW1Oxh5zS00vvQM7ukzKfvVddgK+r9
7G25rofX1l6m+7/fo4RC2EeWMueMhMvfev9/j1wqsWUHVnTfS/v5bAGQfdgzWnDwaX3qajH0O
pOKWP+AYWUH3vK+of/Yx2nqnemfsdwgjr7oJd5/p2IEVS1l+xYX4F85HMZspuegKis/+OZaMg
fWp3hAtGKD59ZepvO069HAIe/koxj/0HK7J0+j45ANWXH4+sc4OzJlZjLv/SbL2P2RQritEOo
WbGqh58A6aXnkeDIOcn/+aFd4sHr3lt4QCAcZMm8Edt9zF6usuJdJYj+p0UX7NrdTb7Khv/g3
Dm8FnMYN/v/oiuq4zY6/9OPvY48kCah/5A1pPF5acXCpuewDHpKks/+WZiffwiIuvIP+kn9L4
lyepe/Ih0DTc02aSfdDhrLj6IsY/9BzuydM2GHukrYXaR+6j4bnHQNfxzNqDzH0PouaB27GVl
DHm7j+Rued++JcuomvO5zT/7UX8i74Hk4kRF/6K4vMu2WSfe9+ShSy75GxCq1egWK2UX30zBa
f8DCMcovaJP1L/xEOJa4+58yGcFePo+upzll16dryHs8fLmLv+RM6hR/WbkGihIK1vvMbqm69
CDwWxjShn/J+ew7OBZTZCDIWNTeFeW0TMMAy0nm5Ux7re7qrNhh6WBFoIIfqSNdDbSKSlieWX
nUukqQFLTi56JEzHR+8CoP3oGIyq1fj//XcwDPJPPI3KO36H1tMNxCvbVt91AyXnXUJw5VIaX
3iScH0NEG8x4XvkXo489DDuvupS9jv0cJ5/+S849z0EPeBn9U1XUnzuRTS/8jxdX366wfj8C7
6j8o7r0cMhAMK1Vaz5/W8J9t4x3pD2995KJM8Qr8pr8ngxuT10ff4Rza+/TKixju5vv04kzwB
dn35A27v/SvysR8LUPnof/oXzATBiMWr/eCe+Bd9t/ou8Cf6lP7D6+ssTzzFUtYZVN1xOYMVS
lv3yTGKdHQDEOjtYdslZBKtWD9q1hUiXrq8+o+mvzyUqaIfHT+H+a35NKBBvRXPGOT9nzQ2/I
dJYD4Ae8FPzxzvIa6on9NWntIwcw7/++gJ6b6Gu+V98ip6ZTc0Dt6P1dAHxnvUrr72EaHNj0n
u45o930fPtHOr+/AD0VsD2LfiWwMplqDY7q2+8gljvONefnm+/puGZRxJFwnrmfUWoajWO0WM
J11Wz+sYrCNVU0fDys3TP+TyePANoGrWP/AHf9/M2+tpo/h7W3HotodUr4jFHIlTeei2BxQvp
/u4b6v/8YNK1G55/nHBDHcsuOTNRPE3r6Wb5ZecQ6D3H+gLLFrPy2ksS60bDtVWsuuaXRHvHG
yHSYaNFxHoTaD3gB5MZ1Wpdt89ixYhGExXthRBCSAK9zUSaGxNJr3PClKQPdgGLFXPVuvYphq
6nVLWOtrWihQLYSsr6bXXiikbo6ewg6PPx/ZwvUCb1FqPRdXS/H4DOz1NbRK0VrqtO2RZYupB
oc8NGn1fHx++nbPMvWoBjdLzIWfsHb2NEIvTM/SrluM7P/ovWOxUs2tFOx0fvpRyzOf2pN1e4
piplm2/+XMJ11fEPCn1ovp5EQiHEcNb1v4+Tfm5uTm6DV+T1Eq5Nfm+4xk6k65P3seQXsnx1a
munYGN94ouotWKdHUSbk1vDmTMy8S9J7dve/c0XuKfuQs+3c4i2tWww9p75qes9u+d+hWtKvE
hhcOUyIk0NoMXo/uaLlGMDy1NbafUVbWuju5+2V+GmhnXJeB/tH7xNtLWZaFtr0nYjGo3Xqeh
HqDZ1bPUv+UHa6Im02ngbKwt6JEKsqxPzel07FEVBtdnR1vubKYQQOzNJoLcRc2Y25ux41efQ
mlXx4li9bNEYWvG69k2KxQJq8q/C5PZgsjuJdrQlValeK2yxYXc6sbvdVEyaAtVrEvtUV7ztl
WeX3TcYn6WfImK20pGYMrM3+ry8s1LP6agYS6j3A7l31z0xVDOufqZpuqfPwtTbSsrszcA9Y1
a/MQyWvi3B1rKPGoM1vzD+mvehWG1YcoeuoJAQ24p7xq5JP2dl5yb93BWNYslJ3hasXIV75u5
EW1soL02tB2DLzYf17l6pDieW9c4d6+nGMaoi5fGuiVMIrl6Bo2Jc0rrilOP66Q7gmjiFUG+/
ZmvxCExZ2aDrOPupYG0vH73Bc0O8fZ9zwuSU7ZbsHBwV41K2e2fvgSkzC1Of2g4AqCqW3P4LM
Vrz+xlbS8oS3RWESAcjtvEp3EY4TKyrA1M/bTNVp1MSaCGE6EMS6G3EXlLK2Lv+hGK1Ea6vwV
pUjL33Lq3960+JjSjDNj3eaqntnX9RcuGvEkm0YrFQeuk1NL/xCqrbTcm5Fyf1Y3ad/DPe/eR
DLrnh98z55APOPefnBN5/CxSFkl/8huZ/vopn5u5k7nvQBuNzTZpG4U/PS/ysOl2M+t3t/RYS
6yvnqBNwjJ2Q+Nk5fjIml5tYexu20pEUnHY2juISvLvtndTayj5yNHk/Pjnxs8nhpPzy3yW+Z
ADIOeZEPNNSk+ot5Zw4heLzLll3TZebMb9/ENf4yVTc9sC6hMBkYszvH8AxcsygXVuIdMna50

A8fQoGutes4LSLfpX4+U8P3M3I6+9c1xdZUcg79hSCE6ZgKRlBqd/HzD32ThxfMKIUi65TcsF
l68Yos5lRv7sdtaAw+T185HF4Zu5OVp9Kv5a8AjL22p/AssVU3PYAluwNt5Pz7LonmX1qEVgL
i/HO3B3fwu9QHU5G33A3ropx5J/8E7IPOTLpS6/sw3+c3L6uH5bMLCpuuS+p7VXhGRfgmjQV7
3pxW/MLKbnw1zhKRzLmzofXfenW2xbPObb/sdI1YQolv7g88bPqcDLmzoc3q4CaENuKHomkfA
m2lsnlJtbVQayrM/XLIuJ/rzW/b1uHKIQQw4a0sdqGDF0nuHo5odoarLl5mLNzCFWuBsNAy8j
C190FHW2YTSa8E6eg9HQTqq7EnJlNNCOT4JqVWJxObJ4MjGCAaFcnhjeDpkAAq9OFYjLjzMwi
KxYmVFWJNb8Axe6ASBjHmPGbbNESbKwnuGwx0fYWHOUVeGduXnXYUG11vFUN8Ts3kdZmFNWEa
/I07L3ttPRolMCKpYQqV2EYBs4Jk3H1c4cnVFNFsHIlJqcLx5gJWDIyB/Yib0LM7yO4chmxzn
bsZaNwjIonyWurBIcb67EVFuOoGCdtrsQO08Yq0tYS//8+HCLkycQfixH29dDd1krx6ArycvK
JNNYRrq3CnJtH0JtNNByCWBRrRxtkZtMcDBINBikpLMTp6wEMTA4nkaYGrEUluCfPwOzxxN/D
a1ZicrlxjBmPJSOTaGcHgaU/EO3qwJKZTbSnG9eYcZv1JVW0ox3/0kXEOtux5OahhyNE25pxj
BqDa8oM1N4kPlRTSbihjmhbK5bsHJwTpmz2+BGsXE2oejVmbybOMeMTSUO0s4PgiqVooSCO0W
MT1fkNTYuP5XW1WPMKcI4dj2q1bfD8sYA//vp3tGErHYVjVAWKIl1ERJIhHW8WnPwjco44Fve
k1Nlh/iULaf3365Scfyn1z/2ZssuuSdq/6obfMPbex/D07QsvhBhO5A/QINsuq3ArilIJ9AAa
EDMMY+O3FdIsWF9LqHIV0cb6eLuq3Dx0fwDN34N95GgcE6YQWr4Y3+KF2IpKMGVkEatejcftR
Teb0TUNraWZcE0lJrsDw2zCFw7R7c0iGPBR0N2FxdeDkZNLYyBIV2cnRW4PzuwcHKEg0a4ODC
2GYRgYAT+x9lY0v7+3R6uFWEc7powM3FNmYM3OJVRfg2/hfNA0zFk5mNxetFCAlrf+gXP8pE3
ehbaPKMM+ooxYTzeB5YtRUDB5vATWrAbdwD6iDNViwT1palLV7X7PVVqOvbScSFsL/sULAAMU
U7z4WlY2ttKROHunhMYCfoIrlhJpacI+ojyR9Gq+HvzLlxBtb8VRPgpHxXiU3g/ZZpcbz/TUu
9qq1YprwmRc/UznFGJ7p0ejBKvWEG1uIFxfgyWvIN7fPTefcGM9voXfoUciaMUlNDQ24HK5yD
SbiDmctNTXYfH1oLS3YS8oIhQIEA766A5H6Gprwe1wUqRrlMUimHOzibY2oXgzUd1utECAiGE
Q8vloWfgd7u5OLIoST0BVhe55X6Goajxp7miP13fQNAy/j0hLM/7aGix2G3ogQLS9DVtJKa5J
UzG71t31smRlk7nnvgDEfN0Eli9FD7kxORxJnwD0aBTN14MlNw9rfgG+7+ehqCrOcROxbqC/s
qHrBFYuI1xfg8mTQaS1ubf//AT0WIzg8iUYsRiOMeOTWtspJhPOsRNxjp2YdL5QXU28QJrZHL
9u79IYs9MlyYbYrhjRKOoGpnCbvZlEWlvid6CdrpT9qt0hd6CFEKKP7TKB7nWgYRitmz4svfz
LFtP15adU3nkDRiQMQP5JPyHS0kTnJx/gmb0nGXvsS+3Dd8cfYDJRftVN6IEA7e/9m1BtFSOv
u43Fl5+fKCSWd+wpOE44nefuvY2fHX4UDQ/8HmvFOFbsth9PPHgPEC/scfndf2TCrN1ovvgMQ
KH8yhuouueWRPXXvOP+D8PQaX3jNQAy9j6A8qtuZvmvzkmsKbSXjybv2JNpeu0vFP7kXNbcdA
UTHn95k71Ko50dVN93K41/eQoA1Wan/MobWH3dpUx49IV+v+XekFBtNSuu/AVadxcZe+1P/VM
Px3eoKqWXXUvmAYfgrBhPwzOPUv2HWxOv4/gHniJzv0OoeehO6p+MP0axWpnw2EtkH3DoZl9f
iOGm45MP0Hq6WHnNLzGi8f6thT85l4KfnMuyi39GaM1K7Mf9H6/X1FIxfhJ75efyQV097739L
64590KqHr47UW26+LJrWZGZw9O330h7U7zg2MTpu3DuQYegf/A2Bf/3Mxo++YDsAw6h+g+3xQ
NQVdwXXcFSxUThO/+g7MLLqP7DbUQa6ig8/Rz8y5fQM/dLAMxZ2ZRefAUrr7mEsX94DP+KRir
vvD4Rd/EFl1L6yysxu5OLF8W6u6j+4500PP0I0Pve/vNLZO9/KN1zv2TRWScmigFmHXQ4JoeT
1rdexzl+EhMeeSEx2yTpdfvsQ5b+4qeMvPImqh+4PdH5IOuQI3GOnUTdo/cC8anjk57+20a/Y
PMv/YHFZ58UL2pGvMbDuAef3mSPaCHSQY9GNziF25yRRayjjWhXR7xv+3pUu10SaCGE6EPWQG
8FIxaje95X1D35UCJ5Bmj+24t4Z8aLbWXte9C65Bni7VYevgf7qAr8SxaSd8xJ1DxwR1IV7pY
3XiXcWMcuk6cRfvphjFgM49BjeOqhP6y7tmHw0PVXEg0Gcex3CDlHHkfDC08kkmeAln++gnP0
umnTwRVLaXvnjUTyDBCqWk20vQ00jeDKZZi8GdQ/9Uj8j+1G+JcsTCTPAHo4RP2zfyZjz31pe
ObRTT6+r+65X9I953OyDzua+qf/tG6HrlP36H30fPMlgaWL1iXPva/jyusuxb98cSJ5hnil0V
XX/JJw08ariQsxXAWr1qB1d1J5x7okFKDxxacILFlIaM1KANpLRvLl+++w78zZdGoGL/z5YU4
+5ScEHl/Xqgmg/b1/8/3/PkkkzwBLvv+OKpOFaFsLodoqco86jur7b18XhK4TePIhtKAf0/Gn
0fXFp0Qa6sBkwpKbl0ieAWId7XR8/AHuabtQde8tBKtWJcVd//gfCSxbkvI8/UsXJZJnWPvev
oRgdSWrb7k6qZJ+x3/fwTkufnc4sGwx7f99N+V8kaZGVl1zCZl77EvrW68nkmeAjg/exmRfNy
U70lhP48vPYPR5nfoyNI2GF55MJM8Avu/n0fXFJ/0eL0S6GeEQqsXa7z7V5UIPBYk0N2JybeA
OtC81ga68+ybCDXWDHqsQQmzvttcE2gDeUxRlnqIoF6y/U1GUCxRFmasoytyWlg23RNnWtFAw
3v6ovjZln96bUOt9EuvE43q60brj/VTNWdlJH8LWirS3ke31EmtvA6AnHE70ZU0cEwrR3d4KZ
aOwFZXE11dvIA4A24iyfvukBlevwFZSSmDlMuxlo/D/MH+T3zb315IlXFuFNa+A7m/noAcDG3
18X4GVy4D4FDPWW5Ovh4LEOjuJNKdeT+vpJtaROkkh0txIrKtzs68vxMZsL+PNWrHOdjCbE32
J+1o7lihmM+2+HgD0rk56eltQuS3mpC/ZAEyl5Syb/23KuapqqrHk5BFYvgSTw5WUdEP8velS
VfwoBHvfw2a3N/6F3HoCK5ZgLx9NqHI1Zk9Gatz9vL8j/YwxkaYGYh3t/bbK6jvW9Xz3dcr+W
FcHkaYG7GWjCKxIbZen+X1J1fm7v/ky5bVKXCsUpGdeaqs+/5IF/R4vxObaVuONFgyg2u0bui
bmzOz4l+iu1CJiqs2O5u9J2mbEYjQ8+xhd/bSFE0KIHd32mkDvYxjGTOAI4GJFUfbru9MwjMc
Nw5htGMbsvLz0tR4yuz1YcvOTqk2vtbZqtmKxpLRMshaPwJyZBUCoag3OieutE1YUHMUjWFNX
i21kfP1vpknF7nQmHZaRk0t2YTHGgnn4Fy/A00+LKdWx7jGBFUvJOvCwlGPc02YSWLEU76zd8
S9aQNYhR2DeRDEee9moDZ4n98gTkqrcboqnT+XcvtXGgd71jYU4Ro7u93W0FY2A9YrzuCZN3e
AaSCEGansZb9ayFhaj+XqSquEDoCjYR8Ur/RuxGIWZmfHNuflk2WyYLRYau7qxrFcNWluxlD0
OPYL1TRg3nnBjHd5ZexBta04aSwAsObm0hsJ4wsHE2BPr6sBakNo+LmOPfemZPxfP7D1TE2xV

xd7PtGd72cjU9/bkadhKSsnuZxzrG1/2QYen7LfkF+KaPI2e+XPJ2GPflP0mb0bSnfHco0/od
z0oxKsW5xx1fMr2jD326+doITbfthpv9GAg5e9rX+bMLIKrV2Dur41VP2ugA6uWo4eC+BZ+N2
gxCiHEcLFdJtCGYdT1/rsZ+AeweeWh08A7e0+Kz7ko0UPU5PYw6oa7aXv/LQC6533N2HseSyT
MtpIyyq+8kY6P3yf/5J/S9sFbFP3sAhy9La5MHi9lv7kee34hituLdvq5WEtHEv3bX7j6xtvJ
yot/+M0tLuG3f3oai6qiNzbQ8ckH5B51As7x8d6oqtNF+bW3EaqK35VWrFaKz76IrIMOI++E0
+MfTBWFnCOOI9bZgXe3vUFVcU6cQsEpP9tkxVjnxCmMufsRTL09px1jxpP345MwDIP8k04fUM
VZ78zdGfHLK2n+5yuUXf7bRI9aa1EJZb+5now998U5dgLjH35u3es4opzxf3wG59iJjLv/iUT
Cbh89ljF3Poyl9zghdjS2giJcE6cy8uqbsY+M9z02eTKouP1BXJOnkX9i/P3tmvMZ5119Ay/+
9QVyR5Rx1c138M5b/0S94FeJ3vKWnFyKLvoNxaNGM/vAeN0Ak9nMST87l7xVy8g+5EiMaISeB
d9Rcccf1703C4uxXHQlpWXlxP75Cp5ddiP7sB8D0DN/LsXn/jLxhZd3172wl41EUVVGXHgZri
nTsfcWBjR5Mhh3/5M41/8yAHCNn8y4+x5PvLcdFeMYc8fDWHPzKLvyBty9RbpUu4PSy66l46N
3QVUpPON8MvY+IOV8lswsxtzxEJrfh3vaTNy9xQUVq43yq2/G5HAm1ojmHH4seUefuNHfQ96x
/5d4zphMFJ9/Kd5d99yM36AQQ08LBFBtG64cb87IJFxXg+rqJ4G22VISaN+CbzFn50gCLYTYK
W13bawURXEBqmEYPb3//T5wi2EY7/R3/PbQVkbz+wnVVBLtaEN1urHk5UMkjOb3Yysegdnjxb
dsMbHWZszZOaguN7G2VjCZUAwDPRzCnFtAtKUx/gHOm4lf1wmEw4SjUdwmFVcsiu5w0RmNEPL
5yM7JQ3c4cOkaZr8PAn5Mbi+KGm/RpNrt6MEQisWMEY1hzsjEOXositmMFg4RWLYYPRrB5HJj
xGIA6KEQzrETsWSkTrHsj2EYhKorifV0xf8wx3Ts5eWYnKl/gDdFj0YJVa/B0DQUq41oUz0mt
xfbiPKkeEJ1NcQ62rEUFGLrrXgLEKyuROvuwlZUkviQL8QADas2VuHmJqKtzUTbW7Dm5OHqnc
mihUMEV62If+D1emnz+TEAj0mlOxgkpBtkOhxYAj5sGZkEu7sxPF66ImEiwRBOq5UcixlFi6F
arOiRMKrJDA4HRjRKpLuLqM2O7nTi6ulBNZkwOR2YetvtoZpQbFZibe2AgWKxovV0YSkowgiH
USxmNJ8PPRzCXlKGvbR8o89z7XvbWlyCNXvdezvW1UmorhqTw4WloIhwTSWKqmIvH7XRFlPR9
lbC9XWobjd6IIDJ4cBeNgpD0whVrcbQNOxlIzd497mvtWO/YjZjLx8trfDEQAzZeGNoGl+Mz2
XyC29s8Mvtusf/SMfH71Fx2/2JL/TXan3rdRSLldE33JXYtvK3v0IPBmh779/ssaA20flCCLF
dkjZWg2x7rMJdAPyjd5A3Ay9tKHlOF9+iBfgXLyDW1YFj9FgMk0po5XKsBUVYbDaCK5YQXLkc
1eEg1tWO6nQTqashVF8Tn67d2kKoeg2KyYRj9Fhi3V0EV63AVlpGuLWThpYWqutqcXgzyC8ew
YJFC5g6cRK2jg580Si19XXUu9wUjijFrOsEq1ej5ebR1NRETk4uFouFFUsWM6qgAHtrM6qm4R
hZAWYTwSU/EPP5cE2cgh4IEGmox5ydQ7S5Mf7Bsq4G1WbHVlhEoHIVut+PY1QFkdYWIs0NuCZ
NI9JQR6yzI/5B1eUmUl+Le9I0XBOnJF6jaGcHvoXfEaquxFpQiGp3Eqpeg3P0WFxTZ2Be71tu
1WLB2bdPdO+dtfXZS0qhT3uZtTZW+Tawajn+H75Hj4RxTZqGe/LmVwgXYnsQaqilZ+5XRJobs
RYUxXvF22xUNzfT1d7OJNWM77OPMIXDNEcjVNbWoJhMjK4YQ6HDQXDNKqLdXeROmooejRJtqi
PW3oZSVEwwM4cV383Dk19Ac201qqpSMXY8+XYHajSK4esh1NJEzOfDXD4ai9uDpa6GaHsLVIx
HNwz8C7/D5HTiGDsB1WolsPA7NH8PtuIyzLl56LEY3XP+l3j/a6Egvvlzaf3PG5gzs3BNmoZq
sdAz/xv0cBhbUQmKasLkzcBWWk6kuYGe7+fhGFWBc/xkgquWE1i5DLPbjepyo333NebsXGJd7
aAoOMeMJ9xQh2/Bt/H2dmMm4J46A5PdgSU7F0t26pds8VZV8TvhofoaOj79kFhHG86xE3FNmY
6pn+mvJpdLWuGJ7Z4W8KPa7BudGbZ2pke/d6DtzpS6Ir4F88g/8Sd0ffkpoao1OHpnlQghxM5
gu0ugDcNYDaQuKt5O9Cycz6rfXob/h/mJbaNvvY/aR+/DOW4ihT85j+WXnp0ohuWoGEf51Tez
6obLyTvmJFSbg+o/3IrW04VtRDm5x5xI3aP3MfK3v2fFlRfRc+YvuOP6q1g7M2DkhEmcffk1d
Nx7C80/OoZ7broucd0x02Zw7JnnU/j264S++wb3RVdw74P3cNGvrsIe8NN23aWJImSqzc7oW+
+j7Z1/EWmsxz19Fl1ffkLx+ZfS8o+X6fjovcR5S86/lJqvPiX30KOpvu82TC43pZdeQ7S5kdU
vP7OuireqMur6uwhVrWL1Db9hyotv4pkxGy0cou6JB6l79P7EOXOPOZFIcxPdcz5n9C1/oPAn
5w5omveW8i9bwqKfHk20rTXxOkx+8U28M7fbVQFCJAk3NbD80nPomTcnsW3MnQ/zZVMTf779R
u64+U6Mjja0pgaqI1Fu/v0NBHriBX9cXi8333o3wZuvxLvb3kTaWtD9PhpfXFdB333k8bDH/t
x85slEe7sBZOUXcONjz+Kd+xVdX36SVHyw5Ia76Hj1BUK11Yy59T6W/+aCRIExe/loyn7zO1Z
e+Qugt73dVTeBocdb/cVijP3Tc2idHaz+7a/WxTB9Fu7pM2l8/gkg/mG+9OIrMefk0vDMI7S9
8y8ALLn5jLj4CtbcfFXSY53jJtL15WfkHnU8a266mskvvMGa266l++v/JY4be+9j5J9w2qZf7
8Z6ll9yTlIhsnF/fIa8o0/Y5GOF2B7pwQCqY8PrnwHM3vhML3N/RcQcDrT6mnXni0YJrFyOY2
QF9pEV+H74ThJoIcRORebcDJD/h++SkmeAmgdup+hnF1B0xgVU33drUiXp4KrlBJYtIffoE3B
UjCOweAFaT7wCd+5Rx9Pw7GM4J0yhZ94cbPsfytNP/Im+0+orly4m5PdjmrkbTz36x6Trrlww
n7a2VrS9D4pf64Un2H+/A1m2eCFFgZ5E8gzxNlNt7/yLrIMPJ/vgw2l65TlyjzweIxxOSp4BG
l54gqy9DyTa3oo5OwfN78P3w3fYykYmtcBC12l84XHc02aiBwM0/OVJDMMguHoldY89kHTO1j
f/Tsae8cI9lXfeQKimckCv+5bq+OS9RPIMve22nn4EvXfauhDbO/+ShUnJM0CXzc4Td93CIUc
fT6ah0fPZBwRWLuV/879NJM8A/u5uPv/6K+xlo8jYaz9MNhuNf3026Vx6cwMfv/G3RPIM0NHc
xPxv5mDOzEqp3N/04J3knncxI35xObWP3ZdUnTtUtTr+fuudzqmHQ3R8+gG+ZYvJ3Dc+TpldH
mru/33SOX3fz8Oava5gktbTTWDlUnwLviVUU5XYnnvMidQ8cEfKY20lpYRrq1CtVmK+bnyLvk
9KngHW3HYt4YbUjgnr8y9ekFLFe80tVxPp0+ZLiOFE8/s3WkAM4mugURTU9YqVwto2VuvGlWh
LE2a3B9Vux1pY3G8HECGE2JFJAj1AsX56IUY72rFkZqFYrf1+yNLDQcyeTBSLlUif1jOKxYIe
DGDJzom3bMnKTurFulYw4MfweOlsTW1pocVihHqTQa2nC7fLRWdnB0Zvm6ykOFubUc2WeIKu6
ygmU2L9c1K8oSCqxUK0vS3xrXS0pRnFlLq+L9LSnCi8E6pajRGLxfuz9re2XtPi5w/4N9geZr

CF+2kxFqpegxGN9HO0ENsfracnZVsUCPp85OTmgt2JohkY0RiN/YwfjY0NmDOz4v3kDSPxPlx
Lzcqhua4m5XFtjQ0oltRJSrHuThSLDWtOTr+tpjRfT1JF7GhLM+gG5qwcABTV1G+rK0NLHosi
LU1owQCW3scBmJwuYt2dKY9d+5y0YBDVakPzdaccEuvqRA+lthXsL/71Rdtb0cJDM2YJMdi04
OYl0CaXu9+1zKrdnlRELNLShDk7/r60ZGYR7qcVpxBC7MgkgR4g5/hJKe2Ucg47htZ33sS/eE
G8Am5fqoptRBldX35CtKsDz8xdE7v8ixfimb0HPd99Q+Ze+xP77EMOO/ak5IebTOSPKMP46jM
OOuq4pH0msxl3Rgbero54bHsfwJdffcHkiVPQRiUXAQHI3O8QQnU1RJoacIwaQ2DlMhS7LVFJ
ey33jNn4ly3GNWEyoao1AHj32Cf+oXS9adc5hx9DrLMTgMLTzka1WLCXjcJentzmyppfSKwn/
qE2Y+8DsBWnrmPeFvprZ1P4k3PjFXeFGAacY8enjDmeYIDZ+x/ER++/Q6SjHbW0HGvxCPbfZ/
+Ux++39774lyyM95/v6U50DFgrtnIpB5/wfymPm7nvAWg9PSjrFeTyHvAjAt/Oofkfr5B3zMn
JD1IU7OWj0Pt82M7c/xCsObl0/e9jAMKNdeT86Jjkh1ksKBZr8nVm7o5rwhT8fXo2d8/9isz9
f5T8WKsVxRRP9C3ZOejBAM5xk1CsyefLOfxYrEXFKc9zfY4xE1Je77xjT8ZWuOnHCrE90v1+T
Lb+e0CvZc7K2WD7SZPdidbn5kGkqQFLVnb8cRlZRJtldoYQYuciCfQAeabPZtwDT+GcMBmTy0
3+iaeTe/SJ+BZ8S+dn/yX3uFMo/NkFmNweHKPHMub3D+KsmIC1qITmf/wVx5gJlF52Ddb8Qnw
Lv6X43EvIOuhwApWryTvkSA6sqODY08/C6fFQPn4Sv77/Ud557SUcx5zE0bvtxtGnnI7D7WbU
pCn86r5HmFhUTOg//8R12I9p22M/DjjyxxSOruDvH7yL97JrsRaVYM7OoeSiK8jYa3/a//sO7
R+8Q9mVN8bvPms6Y+55FM8uu6I6nGQfciS5R59A5j4H0fPdXCw5uZRffQuxrg5a3niVitsewD
F6LCaPl4JTzyT7kCNpevU5Rv7uDrL2j7fBseblM+HRv5B18OGoDicZex9A6W9+R8u//kbe8ac
y+uZ7MbtT11ltk9/XrN0Y+4c/x3tvZ2Uz8tpbyT44NakWYnvlHD+ZSc++jnPSVEwuN7lHnYBV
Vbnw6huYMGMWc9vbcEyYjKmgiHG5ufziyt+SlV9AdkEhl9z+B6bOmIVj1Bha//13PDN3p+TCy
8jc5yBUhxPvHvvi/dXvaK6v4+SLL8eblU1BaRm/vvdhRmdn45oyg1E33IVr4lRUp4uc40+l4L
xLiFWvwbfgWzyzdo+Pd54M7KMqGHvf4yh2e+L9VnzuxdjLR6M4HMR6usk7/lS8M3ej+ILLyDv
+VEwuN87xkxj/p+ex5Bdiyc3HklfAiF9eiSkjC7Mng3EPPIF3t71RHU6sufmU/epaCk49E9Xp
wjlpGiOv+z3tn3zAyGtvpePzjxhz58O4p89m8rOvx4t/udwUnHoW5Vfe0G8hsPW5Jkxm0jN/x
zlxCiaXm8KfnkfppddutLK3ENszLehHsW88gbaVlDLqt7/vd5/qcKAFkhNoc0a8VaQ5M7PfmS
hCCLEj2+7aWA1UutrKRINBjEgYxenC0HUUQFFVDMPA0DT0nm7QdUwZmfHWTCYTRjRCzO9HwcC
IRDC0GIrDhWpS0bq7Ub0Z6H4fmslETyyGxWbHbjIR8Puwuz2o0SiKCt2hECbVhNNkwWIxEfP1
0KPpWCwWXC4XZquN7p5ujGgUt9WCEY1iKyzC5HQT7erE0DUsGVno0Qix9jZMbg/Rrg50nx/V6
cDkcmPNyYsXHIpEUFQVRVWJ+X1Y8wrQQyFine1Y8gsgFsOIxrDmF6S8RlowSKyzHXPva6D5er
Dk5KGud2doSH5fbS0YmoY1v3DIry2Gje26jVU0FMIwNBTVHB9rADSNWCyG2WYjFgxghMNgaPj
9QTCbcVkt8SmZmo4RCWPKyCLi60YNh9GiEUwZGWB30d3SiMPjxdfjQ8UgOzMLxWYjGAxiiUQw
ohE0XcOanYcSC8fvRmkxFKsNk8tLtLURk92BOTsHizeTaFsLWjCA6vZgychC8/vQgwHMGVmJ9
78WDBKsXIXJ48ExIt7KKtLSjBbwx8dUiwVb8QhUVSXm60Hr6cacnYvJZotXEm9tRnW60YPxCs
NGLAYKWHPz171m3V3ofh+W3PwBt5iKdXei+f1Y8wpQzNtdvU0x/A3ZeNP6nzdoeP5xyi67Zos
eH+1oZ9Xvfs3u8+JrnavuvZVIcwP5J5xGuLGe6ntvYfbni7Y6TiHENiNtrAaZfCrYAMMw8C34
lrZ338Q1eTr+RQtwVIwjuHo5oao1eHfdA5MnAz0YwNB17CPK8C9agCW/gNCaVYRqKsna/1CsI
8roWbOK7k8/QB05BsvMXTHFYgTf+gfqrD1ot9nJMnSyrRYseYXoPh/hlkYanW6+nPs1Y2fMor
W+hp62do7cdz9Cn30IZjOZ+x1Cw2cfYfV4yNxjX0ytzbT9910CFeOwFZUQ7WzHNXEqsZx8ur7
6BN+C78g5/Mfxnqy+bgJLfyDW00P2QYfR9cUnxHw9ZO13MCZvBl3/+4RwbRVZBx+Be8ZsInU1
tPzrNczeTFyTp6EF/LinzKDtnTcILF9KzhHHkrHHPlgys5NeQ5PDgclRkvjZvIHpYUPBkpO36
YOESCMtGKB77lf4VyzBOW4SsfY2euZ9GW8ftef+fPL9dxxw4KFYlv2A77tvyD32FDCZiTTU0v
31/7CNGY9j5u6EvvgE1y670WB3Yu3pwrpoPtGGWjJ22wdLbj7R7k4Cvh66C4p545UXGT95Krv
vfxDKt18TXLKQ7qmzeGPu1+w7azb25YvRmhvJ3PsAApUrsWbnYcnJRTFbMGdm0fTS03j3OgBr
bh5t7/0bs8dLzuE/xpKZTfM//kqksY7sQ44k5vPR9eUnZB3wI8yZWbT84xW8s/cg68AfJZJni
M9eAfAtXkDb6/8iXFdN7tEn4t1tT2xF68YS1WJZ9/NG+tZbvBng3by+9uszezMxezO36LFCbE
/0YAB1E3egN0Z1OOK1TXqFG+ux5MTXQJszs4i2tWIYxpB01hBCiO2B3IHegJ6F3/HDKYcz4pd
XUPfYAxSd/Qsa//Iksc6OxDEjLvoN4fY2PNNm0vzXZ8nc9yCa/vpsUtXn0l9dR9PLzxDpLbJh
KR1J+Oxf4v7g3wS++BjX+Zfyt2+/5aSiAvKmzECxO6gOBbn+uis45uwL+ebDd2moXM1dd9xH6
K7rE+dVzGbKr7yJyjt+hzkji6KzLqTmwTsBsJWOJPuQIwitWUnu8adSecvVRNvbGHntrcQ6O2
l6JR5j+dU3U33/7RiReGGd0kuvpuG5x4l1rXuOZVfcQGDZYlrf/BsAqsPJmLseZs0t1xDtUxB
t5G9/T8m5vxz034MQQyitd6DbP/gPSy44lQmPv0xw9Qqq7/t94r0JUPzHp2l77AHCixfgnDCZ
jP0PRYlGqH/6kcQx5rwCiq/7PY211bSHwmS88Ge0PkW3Si+9GtXmoO2DtzAKi3l+1Rrmf/U/y
saO57IfHU5oRBk3XH81V1x7ExnPPZJUUKvs17+l7smHyDv2FBS7DTQD1WbHnJFB1V03Jo5T7Q
5Kf3UdVXeuG6/KfnM9tY/8AT0YIP+kn+BftAD/koW4p89i4hN/Tbpr7F++mIUnH57oVgCb34J
KiGFkyMabhheeoPPzjyg++xdb9HjDMFh0xrHstbQFxWzmhzOOJXOv/fHsEq/psvick9l1zvK0
fkkuhNgo+XZrkMka6A3o/PS/8enY0Ria34diMiUlzwBNrz5Pxuw9iDU34lvwLYrZnJQ8A9Q//
Qg5Rxyb+DlaU4mprQn18Pi28GsvMGbMWHrKRtP2wVsEViymNRRBi8XwZudQt3olk3fdA9PnHy
ad14jFCCxfjG1EeTzh7fNFSLimErM3g46P3ydSW0XBqWfhnjaTzv99jGKJx2jJzSNcW530AR1
ISp4BGl94gqxDjkj8rAcDBFevRA8Gko6refBOQv1UvBZCbJoW8FPzp3soOP1sOj/7iHBNVcp7

```
09rUSHjxAgCyDzoCRddpeuX5pGNiLU1o3V2saGwk39CSkmeApr+9SKi+hqIzzsf/zr845KB43
YLqFcsIjargq/nfoSgK+bFwSjXq5n+8TPZBh9P82l9QTRZMLheeXXal9d+vJx2nh4JEmuoxed
bd+W3512tkHRAv/tXyz1fIOvAwIN6CKrhyedLjfQu+TUqeAarvvz1lbBVCbB4tGEDdRBGxjVE
UJd7KqncddKS5EXPWuhln5uyceLV9IYTYSUgCvQFGLNq7prm3x2k/d+qNWAxFUTZ6DFosUSF2
3QONRDVrIxbDbDLHk/VYDAwwSD6PyWxG6afdlBGLoZhNKefsG4uh6ShmS3wNtqYltitq789rb
WDqlaHFUqZlGZqW6POaFMswn80gRNoYBkY0imqxYuhaSksnAKNPv2WU3poL/Y0Luo6maWDoKf
voHbMUVQXDSPpK2kAhtnZ/P29lI6ahmM0Yerymw9qxr79Y0TQUU58xos9YZeg6qOuubOjJbbU
MLTVuQ4utG2eFEAOi+X0pVekHyuRwovnj07ijLU2JKtwAlsxsIi1SiVsIsfOQBHoDsvY7GCMW
xeRwolhtKKoppd1T/omn0/X1F1jyCnCMGQ+KktIGovCn59H27puJn815BcRy8uGT9wBwnHA6C
xctwNvSSPYhR2IfNYZchx1FUQj6feQWl7Bwzhdo+x6cHKCi4Jo8jVDlalSnK94CpjeBtfQW+v
Luuhe2klKaXnmOnu/nkbXPQYkYI82NOEZWJHo4YxgoJjOq05V0mYL/O5OuLz5dd1mLBde4CaA
k/69TcuGvsPZZoyiE2Hwml5uSX/yahuf+TObeB+AYOWbde7OXVliCdVQFAJ2f/RctFk1pm2fO
yMKSncO4ESNos9iT+jED5B1/KuacHBpfeR7nfofy2RefA5A/ohRHXTV77bobsWiUdocz5Y5V3
rEn0/7hf8g79hRiPh/Rzg6CK5eTe8RxSccpZjPWktKkGTu5x5xIx8fvA/F2UmtbWjkqxuEcMz
7p8e6pu6T0rB1x0RVJ07yFEJtPD/g3qwL9xqgOR7wYYCSC5utJmmFizpBK3EKInYusgd4AQ9P
o/nYOzX9/icx9DqLzi4/xTJ9N97yvCFWuihfDycrBiIQxdA17SRnd877CMXIM3d9+TahqNblH
HIt9/CS6F35H9/tvoVSMx7b/oSiGQfC5R1H3OYg2TwbZqkqOApaCIoxwGH9NJY3uDN778F1mH
3wYaxYtJBrwc9wBB+H/999RLFZyfnwSnR/8B8VsJu/oEwjX1tDyxis4J0zGNXEq4doaPLN3x5
ybT/tb/6Dn2znk/99ZmJxONL+P7jmfoYXC5B11HC3/fh2tp4fcH5+ENSeP1n//nXBdNTlHHId
3930JVa2k4YUnsWTnkLn3gYTbWsncdQ9a3/w7/qU/UHDyGWQd+COseamVuIUYRtK6Bjrm66bz
848J1lThHDOBWEcr7e+/hebrwXro0Xzw/XwOP/wo+OZ/+ObNofCMC8BkIrRmJZ2ffYh9zHi8h
x5N97tv4t3nQBqdbmydHSiff0i0vjb+Hi0agREJ0V1bg2/UGJ760wNMnj6TQ44/GdeqZXR9/y
2ds/bgk0/+y9EHHoz5q8+INtaTc/gxhKorMXszsY0oQzGbseTmUfPAHWQfdgzW3Hya/vYXzBl
ZFJ56FqaMTBqefoRIc2M84fb7aP/PP8k58nisRcU0PPkwGXvtT96xp6Qk0AA98+fS+NLThGqq
KDztbDL3PSjpjpcQO4AhG29WXntpvA3doUdu8TlW3XAFY+95BGtuPt8ffxDj//h0Yl/Dc4/j3
W2vLV5jLYTY5mQN9CCTBHojwi1NaDoYkSBKNIpis6JHovEp2YaOrhuova2rMAxUqwVMZjCZ0X
Qds6qCrmGYzahmCzFfDypgRCModie6YWCy2tCCfkwuD1pXO0rvFE4FAxxuwoARDmEYBlZTfPq
kbrGgRiKYzBYwdAKhEBazBbvVjMmTGa+GqWvofj+q04nFm4Eei6Ga100VV0wmol2dmKzW+F0q
w4hPy9Z1Yn4/GAaWPtVtjVgMeqeBq31auqw97/qi7W2oDicmx9Z96y3EEEprAh1qrEfXNIhGA
dAARVFR9Rg6CorVAtEoqtMDRoxoTw8mhyPenskwUJR4aysjEgHVFJ+yaejx1R2xGIrNihYIoe
ux+HgT9BGNRFFdbiKRMA5dx+J04td1LMRbNCi9YxsoqHZbfHyLxYh1daBmZGJ1e+PrI61W9HA
YLRJOLPnQoxEUkxmzy40ei6EFfFgyslBUNTFuRNvbUJ3Ofu+OxQJ+9GAQa07uNnm9hUizIRtv
ll12LrYRZWTte9AWn6Pyrhsp+/V1mD0ZrLz2EkbfdE9iX/M/X8WSmcXIa27Z6liFENuEJNCDT
NpY9SPa2UH3N19iLipB7+kiuHQRjS8+hep0kX/c/+FfsQTPLruimMyEqtegKCqtb/4N1e2m5N
xLCLc24VdUVoVjTJ48GXc4RKhyFXo4TMsbr6KYLRSeehb2sROof/KPBJcvJevgw7Hk5NEzbw7
ZhxyB74fvce97IKtDEd7728ucdPhR6P/+G7bCYjy770PTi0+hAHk/u5CXP3yfqqo1/OQXl1KR
kYHV7SGwdBFNrzyHEYtRcsFl5PzoGFRv/MNupK2FljdepfGlZ7CPKKP00mvw7ronWk837f99h
9pH/oBitVH2yyvJ2O9gzE5Xog/q+v1Q10+eQ3U1NL/+Es2vvYhj9BhKL7ka76zdh+pXJ8Sw41
++BN+Cb0FRUd0eYq1NNDz3ZxSLlfwTT6d77ld4Z+9OtLWF1v+8QfkVN9Dx8Xt0ffkp3t32Juf
QI6m6+xayDz8ae0kZDc8+hmp3UHz+JViy86j54x3Eursp+/V1tLz5d/zfzyPzoMNwz9iV2vtu
wzF5KrnHnsrKh+9GdTopOf9SgsEAzf98hdxDj6L1368Trq8l77hT8M6Ozzzp/OITPLvsRtFPz
yNj972JdnbS/t+3qXv0fhSrneKzf07nF58QWL6Ysl9dR/Nrf8G/aAG5x5xIwalnopjNNP/tJZ
r//hKOirHxcWLmbkB89k/X1/+j5o93Emmop/CM88g95iRs0sNdiC2i+X1bVUQMwFpQRHD1Ssy
ZWVjWm21mycwk0ixroIUQOw+5A92PtvffQrE7MKIRwlVrWHPrNUn7y6++hZoH76D0179D93VR
89DdSfvHP/ICq2+4HPWsi6jRdCatWoJz7ESq/3Br0nEjr7uNyjuuT6xdzjroMDSfD//iBRSd9
XPqM3P47eUXc/Ntd6M+eHv82lfckNQyBsBzza385rorMHSdO/74OGUOOyuvTJ5KNf6R58k9/F
gMw6D6/tupfXhdzIrFwrTXPyRUU8myi36W9LhJz75O1n7rrb/eAD0apfL239Lw3J8T21S7g2m
vf4hrwuTNOocQaTTkd6D1SITqh+6K37W1WrFm5bD6+suTjim/+haq7r6R0kuuItrWStdXnxFc
ta5ytX3kaDL3ORhLbi41D9yR9NiR195K5R3XU3zeJbT885Wk1nOeWbtjycmj/b1/Y87MouDUs
6h77H5QVcqvvBEjGqXm4bvjd7R7Ff70PLq++ITg6hVAvGXehD89T6hqNcsuOSv52tfcSqy7i4
a/PJlUDbzonF9ihIM0vvhUYptqdzDtn//FNW4SPd9/y4KTDoE+RQ7Lr7yREb9Ifl2EGOaGbLx
ZePrRZB1wKJ5pM7f4HG3vvokWDGL2ZhDr6SL/2FMS+3q+n0fHx+8x9eW3tzpWIcQ2IXegB5kU
EetH99yvMLs8oOs0v/5yyv7gyqVYsnOxZGXR/uE7Kfu7vvqM3GNOxrrwOzItFiJNjXR+9t+U4
3q+/TpefKxXx0fv4d1tLzRfD4rFwvcL5mNzOPB0dYCm4Zowhe5vvkg5j/rlp4ybMQtd11lRW0
P3nM9Tjml44SkMTSPS1EDDs48m7TOiUcJNjTS88ETK41r//ff+X6R+RBrraXzp6aRteihIYPm
SzT6HEDuTYOUqYh3thBsbUM0WWt54LeUY38LvcIweS/uH7+AYMz4peQYIVa7GMaqCjv++m/JY
/+KF2MtGYXI4kpJngJ55cxJfbMU6O+JTwQF0nWhbK0YsmpQ8AzT/7UWyD17X1i5cU0mweg31f
b40S8T9w3xUpyOllZbJbqPpleeStsXHiaXxmBd9n5Q8A9Q/84jc4RJiCw1GETHbiHICyxfjX7
```

wAe+nIpH3W3HzC0sZSCLETkQS6HyaXG733uxpzZla/+7WgH8PQMHszUvabvRnxfsoeL+FYLN6
qqp/jTN4M9N62EACqzY7Ru/5RUVQ8LjdaLIbR235CC/gwe1LPo2ZmEezt2epyuZKqY65lzcsH
VUW1WDD1E4tqMWPNTS0CZhlA5VvFYkmpVA7x6p1CiFSqxQqGhqIq6NEIluzUQllmjxct4I+PI
RtoN4cCZm9mymaTxxvv3bpeRe/4TlNya6w+x6hWG6ipjzF7M9D8vuTT2Ozx8WX907s9KdX6IX
7X3eTypGxX7fEpputXDo9fNxPFakt9DkKITdKCARTb1r1/7CPKCK5aQWD5YuxlI5P2WXLziDQ
1JI8nxGeldc+bs1XXFUKI7ZEk0P3I2G1vwjWVqFYrhaedlfTB0uTxYskvxJyZTbSlhexDjlhv
fwaeWXvQ/uE7dJVXYM/JI3Ov/cnYYx+UtXd4iH9IdE/ZhXB9TWJb4U/Ooe0/b+CcMJlwQx3Tp
s/E7nRRqxlYcvMJrVmFa9K0pLVMitWGb/IMKpcuJiMnl9E5OXhmzE76EKpYLBSdcR6KomDJyW
PkNclTya0lZdjLRlH0swtSYsw94tjNft1shcUp53ZUjMM1aepmn0OInYljVAXuKTNxjBmPxeU
m77hTk9+DThf2kRVEmhvJPvhw2t/7NzmH/zjpHNmHHEnHf98j64BDkmoUmNwe7CMriLa2EFy5
HO+ueyY9ruDEnyTuWrunzSRUXQnEPwyrdjuarwfbiPKkx5RceBmtb/8j6dr28lEUnf2LpGurT
hf28lGEqlbjmjIj6Ry2kjLKr74p+XUYNxHXxPg44ZkxC2tBUdL+8qtuwtLPl5lCiE3TA/6U1n
ADZfJmgAJ6MIglJy9pn2qzY3K6Uma5NL36PAtPPYJQbdVWXVsIIbY3sgZ6A7rmfglOD0o4SKy
jHd+i71EtVmwlpcR6urFkZaHHtHhFbVUlWLkak8OBe8oMgrXV9Dhc+KwWRmRmYvL50cIh0GKE
1qxEMVtxjB2HJTObwIqlhOtqcI6fTKy7E3Qdc0YmWsCPKSOLdk8Gi+bPY0LZSDztzejhMI5xE
/EvXojJZMI2cSqff/8dJpOZSZOmkGcyYcnJJdLcgH/RAhSTiYy99sczY3aiOq4WCuL7bi5dc7
/Aml9Ixq574xg9BkPX8S38ju6v/4diNuPdbW/ck6cP6HWL+XvomT+PnrlfYSsegXe3vXCUjx7
0348Q20BaqnCH29vwL5wPhoahqCgY+BZ+h2K24BhVQXDVCpxjJxLt6iC4ajkZu+9DtK0F/5KF
OMdNwlpYRPdXn2MfPRZbfiHdc79Etdrw7DIbxe6kZ95XRNvbyNznQMJ1NYSqVuOYMBnD6aJ7z
v+wjxqDpagE3zdfYMvJxT1pGtHuLqLVa7AVlhBpbSLa1opr0jQs2bmEa6vi1x4zAefEKXhnzE
6MHV1zPkdBwTlhEsFVK4h1d5Kx94GEa6oIVa3CPX02npm7oZhM9MyfS8+8OdhKSvHuumfSOBF
YtZzur78g2t6Cd9e9cE+fhWkriyAJsZ0ZsvFmzuwKKm67f6u/hFpz+2/BgFG//X3KvtU3XcmY
Ox7Cs8uuAOjhEHP3n46tpBTX+MmMuf3Brbq2EGKryBroQSYJdB/Rzg6CVatRHU6MQAADI34nx
h/A5HZjGPG2VZqvJ94iRtdRHS4MXcOIRlGdTnS/Hz0YwJSVjepwEmttBk1DdXtQVAWD+De4Cg
pYLXTGYqhWK+5wFNWkYMRiqHYnuq5jBHwoThftkSihSJgcpxM0Db9iwuVyQWcbWK14i0cQbWx
EsVrQ/b54qylvBqrVSrS1GdVixZyVDQbEursIRcJEbA7yioqx9v5BDbc0oXV3YckrwNLPFO+1
QnU1GJEI1uIS+UAr0kILh4k01KJYrNhLSgfz1EOaQPuWLcGIRTDCIUyeLPSgD8ViQY+EwWwFt
xeluxN0DSxWiMUS446hayiKih4OojicYHfiCwawRcKYLRZUiw0jGkEPBVFy8jBUE9HOdrRwCN
3jJarrRCMRPHYHtqAfk8OBoahoCtiycohGItDehhGNoLrchFSVju5uLGZzfBzy+4iaLehuN86
YBloUk9uLAcTaWlDMFpwV41C3ctpouKkRzd+DraAYk8s1KK+7GFqxnm4izY2YPV6sUkm9ryEb
b76cXMj4Pz2/1eug6599DFAoPuvClH01D91NwalnknfMSQA0v/4yjS89TckFl7Hiip8z69MFW
DKll7sQaSIJ9CCTNla9uhd+R+s/X8E9YzaxjnZqH76HaGsz3l33IuvAHxFYtZzcY06k/omH6f
rfR5izcyg+6xcEq1aTc+hRdPzvIzL33J/qe24muGYljrETGPXb26l//nE6//sOmfseTNFZP2f
NbdcRWrMCx5jxFJ1xPsFoFJPVhqJFaXjmMULVa3BOnMqIX1xO7dv/YHFeES8++SiRUIgfHXcS
h5aXY1YU3unqZva0XVD/+gy5v7wCpyeDznfeoPm1v6CYLRSfczGK3UbN/bdj8mQw5o4/0vnFJ
zS/8lz8w+0pP2N5+WgmztodW2c7K6+7lEh9Le6Zu1Jx6/24JyZPu475fbS++Xcq77gezddN7t
EnUHb59TjKR6XpNyZ2RqGaSqofupuW11/G5HRRfuWN5B33f5g93nSHNiAd//uYcHUljS8/Q86
hR9H93dd0fvx+YlyJtLdg9mRQ/+TDGNEIOUcej9mbQbihjqwDD8NWUEj1fb/Hv2QhttKRjLr+
Dvyffsjql57G5HRR+NPzseTk0v3NF9hGjsE5eRo1t/+WSFMD7tl7Ej76JK779S8oKhvJz39xK
Y7XXqDkgkto/fAd8o46gXD1amofvR89HCL38GPxzN6DRfX1jBldQcfTjxBcsQT7qApKrrqZxW
1tmJ5/jBE/vxz/kgU0PPc4YFD4k3Mp+sl5OEaPGfDro0fCtL/3FqtvvpJoWyuZBx7GqOtuw1k
xbvB/GWKb8S9bxKrrf0PP3C+xFhZT8fsHydrvYJT+1uSLbcLQdfRwOF7XYCvlHHbMBuswmLNz
CdetW5LW8emHeHbZDbM3A8eYCXTP/YqcQ47c6hiEEGJ7IGugAS0YxPft13TP/QojFGLNzVcl1
vJ0f/MFHR+/j8ntpemlZ+j630cAxNrbqL7vNhwjK2h49jFyDvsxq667lOCalQAEVyxlxRU/p+
gn5wDgmjCZFZdfQGhNvP1LcOUyah6+B3NNJRk5uVTfeyuh6jUABJYspOrOG3AcdixPPXgvIb8
fXdN45++vMN8fIPT2P5g1opR77roFddYeNN15I8ElC2l6+VmMWAw9FKT2kXtRdAPFZEJRFXq+
/ZqmF59K7Pc9/2c8nR34a6tYcsGpRHoraPq+/YYVv/k50Y72pNfI9/23rLruUrSeLjAMWt/8O
40vPIGxXrVcIbYVwzBoevUFWv72Iug6mq+H1TdeQc/8wV/CsS31LJxP+/v/pv6ph1Htdnw/zK
fz4/eB3nHlgdtxjZ9M7UN3owcDGLEYrf96DcVsxvf9XPRwkDW3Xot/yUIgXgl7+WXnYsnITLw
udY/dhx4K4p48HYvbzarLzyfS1ACAb+6XmP/+Fw488ljq1qzijlt/BwcfwcprLyX/mBMJV6+h
+g+3oQf8oGm0vvU6oTUrmaqC/veXCK6IV9UPrVlF5dW/xOV0Yhx+LKE1K6h/4iGMSBgjEqHhm
Ufp+PT9LXqN/IsXsOzSs4m2tQLQ+dG7VN17K1oouJWvvhgq0a5OVl5zCT1zvwTiXRqWXngagR
XSlWEoaX4fqtWGom79xz1bUQm2wuJ+91lz8wjVxNc6G4ZB95zPE/VPnGPH0/3Nl1t9fSGE2F5
IAg3EwiHa3vkXOT86Kl7sYr1p7d1f/w/vrnvQ/uF/Uh6rh0N0ffUZkcY6Yp0dSfuirc3owfgH
PsVqjVfm7ru/pQmTx0u0oz2lsm24voZoT1fK9T7+8D0sM3fDsnoZFqsNn8eLc/QY2t/+Z8qx/
qU/YB9ZgWfGbLr6aW1lXr6IWHdXSquawNIfCDfWJZ+r98N6Xy1vvEK0vTVluxDbQrSjnZZ/vJ
KyvWf+N2mIZsuF66oxezIIrl5Bxm57p4wrtpIyer5L/VKg64tP8MzcHa2zM/Fl21p6MJByfKS
hjnB9LYZhpLSFCi78jmmT4i2sAj09dCpqPPn2+wlVrU45V+fnH2G0t+IaOyFpu9bdiTMUJJaV

S8/381Ie1/buWxt4FTYuuHplyrb2994k2tLcz9FiexRprMe33v8TRixGsDL1/y+x7YRqKrEWF
m36wK1kyc0n3FssLFxbhR6NYO1Ntp3jJtL99f+2eQxCCDFUJIEGFFXFOX4ywcrV/baJshYWE2
tvS2ndAKCaLViLSjBnZMF63/AqZnOiGrZisaRMfVLM/9/enUfJVVcJHP/e2rp63zvd6ez7BiG
ELbKasIQ1oCC4AgMyIo6go4wcUEHloKOAOiLOiJkIMoggaFgEZZMoYiAQspGEQMjS3Umnk04n
vVVVd935470kvS9Jpate5X7X6Oqd2P1ln5171t+7/2qfu/3AogIgZzuj3SRUAaBHh4JNWb8BLSmm
nhZBY0NuwmLEKmpInPytO5xV1QSq6slUlNFeFT3ptbx8spOPXrv48/N6xZTxrDuJ+Dw+Ml2X6
IZMv6sLDInTe02Ptylp+hUF8gvRNvb8GfnOMdml9sg2up3Eh7ZPafw6HFEqrfiy8rusUfdrk0
0A4VF+PMLemwuGygqpn7PgS/oskJOz98SDPb46Lrw6LHg9xPdXt15ggialY0/0trjdsjqYXsN
RKCwuHsMo8ZYeeMh/pzcHh8DGexh25rDp/XDD7r1an+oNq1fy8LvfpPvXH0Fv/jmzWx8dzWh0
rL9TbgbXv8b2dOO3t9xadb4yTSvW20tSIwxacMq0EAoL5/icxfQ8PdXyJw4hYLTzzww0e9n+F
XXU73w54y66dZOj5jJO/4jtG7dROW/3kQ8GmH4Vdd3Wu7IL//H/mcg1r/4HJVf+Eqn6RVXfoG
mzZuI1O+k7BOf7TSt8robaa/eyugJB+75y87L4/x5Z9O2q47NPj9XfP4G9PnFhD5yOsUXfaLT
xUrGiNEE8gpo211P87o15J98eqfpwcpR1BUUEywqofzT13T67HG3/4jwyDGdxuXMOo4ct3dNA
F84kzFf+xb+rO6VfGMOB384k5H/djO+rAOVqOzpR5M3+6QkRjV4WZOnE6wYwfBrv8TOP/2Ris
98vlO5kj31KEKlwwh36JXan1dA3vFzaF6/hkBhIaO+elunZVZceR0Nb75+4DMmTXW+wAsGaV6
/hqILLj0wswjhq77Ik7/7PwAuu/JaAn97icK55xDdVkOgsIjMCZMPfHZuHgWnzKl9MKkxiYd2
+tzyf/ki71VXI6/8maypMzpdqAdLyii96OMHTtTwz9MKVI
xn/nXs6fXFcdtlnyJrS/ctec/i0bvqAUNngKtCxWIz177zFspdfYMOK5bQ0OS1cdtRU88+i9P+
CBO26hqLyc8z53DZXjxrPwu7exMlfiW6vIbqjll0vZ4n7l+cLhwmPGkvjire4n6fZ+4cX0
R9xYyY4zxCuuF26Xt7exd+TatVVsJlZUR21ZDvLWFYHGJ89iq4jIknEl8726itdvxZ2UjGRn4
Qhn4MsJEaraQOXYi0doaYjtqagcSaB0GJEP3qO9sZGMkaPxZWbTtnc3sdptpBPLy0XAW9aqgU
IAirS20NzUSKivHl5FBpGorLcWlbN61k2k2iklcph5eS2NrM3GKbF56OwaS+BUIjQsHJ81VUES8
uIuM9yDY8Zh8bjtLz/HoGcXEIjR6MtLTRvqyLW3k5bidPb9vAp09G2KE1rVhGrqyVz9Diypz
rscORyPYamteuor2piaw2piawJkw/61yVjDkXze2tp3rAWXziT7KkzyCivTNSih6xX3KYP1hOr20Hb
7nraW1vIYOEgwQb20hNHwk0aotxKMRQqXDiO3aSaCoCMnIhPY22hv30LZrF8HSF
fhLSmhubISaKvx+P6GSMjQeJ1pbQ+a4iURVaHVvM8kYNYY68bNt84eUFJdQ2h4jDPgLCmnb04
BUjCDU3kakajPxlhZC5RW0ZmTy7tbNlA+rYFhbjGj1Vg0ZbTkFxLY00Ao0uo8GzbgJ7Jpo9N
R4aSp5Ew/+qDXUbSulqa1q2lvqCc8bhLZk6cl5D5OM3Ti0SjN69bQ8uH7BItLyZ46g2Ch9cTs
GpLyZv3XridYWETRvPn9ztvS1MSSp57g1cW/J7+ohNzVNbVYUIBEIhps4+kVmnfZSMD
q1gGvfs5vlHHuS4eBuT5p5D44vPMumeX+LPyto/z7HHyRj+j+AjGfP3b+8c1rV3N6isvAWDGw0
+R1eGLO2NMQlkv3AmWchVoEZkP/ATwAw+o6vf7mv9wPQfaGHPEScpzoI0xR6QhKW9WXHY2xfM
vImf6TAAa9+zhhUd/w+qJjCsnKirS1sXv8uoyZPY/bpZ1J2YJbjzduwuAZ71/0Xijng8TiwaIZQR
3t8su6v2tjZWP/0EK9auYrLrLtoQc49i9LnWXGYrw1bzYl1F34c4
nHq/vQHZr+wDAnYw2GMOQysAp1gKVVSiYgfuA84C9gKvJHQaqzK4aK4a4zxltbNS6aSMZ5cN
Hcu3wbY6ZOY96lnyKcncXe+nqaGhoPhIIKcfP4CMnvoe8Xn83X6xkbn/kCAoxbKJHP4KAp
VaYtGqf7wff7xp8Vk5eYxv3UvzZs2kjV6LNt/9xDB4hIKT52rqJ7yYvsePr3lF18+WFD8YY
k0gpVYEGTgA2qOoHACHwHACLyW2ABYBVoY4wxxpgBBam9uoq2hgZmhDP/nrH7HHQ//gOB9
Dl5BQn7PBEhJ4jWbn1qs/C9m4m388/J/M388+ifC8cznm1T/TePJctj3/DEXJScCezFbn
IXJed/DF+HPiGiO2qpe+YJ8o6fs/9XdGOMSbZUq0BXA1s6SGMYYY4wxtS6S2ZSMZ5cN
557VXeey+eznnk1cyfMy4/v8xwXwijJ9+NOKlpYx4dBHRJS+wPa+A6ppqYps30bCzjrrs4v
yif69S9ywt2/wO/3s/bz3jS7ggkz7zj+5TrNOalYX84Ucdz4ajb7vL+kIwxiRdqlWgxZL
lSSozHGpDMrb4wxQR5U3jlk3sbGrk2f/4+GRedR0PR0cr4CX3FK+5dD8/+0zBQ6rCX/hFMY1+
F+6khLCxuXvkbWU49x5+InmDRiJMN31qQXf1zghCnknnU+9Q/9Q//FcaQ2z3LvY
uW0ps5w6n48Kjj7UKtjHmsEupTsPwa4w7fAPMUEl4ebOn
fhfLX32Z7Vs2fL1v7Ht+ae4oKiA8ILLyejQOmbmltaqK1uQmQ7mNR
pkTDjHc72OL+MgDClF2i4+oz0dBvJ2gKnWlFcRGjCJUWEPCPRRGfH19OLlJUjD+/EH
84jAASiUBrM7S1IYEgueUFI4eiy8BlXiLS207d1DvLkJbWtDdCM6BgAHi0QhtbDbu
J7aqjvakRQfDn5hEsKSWKqpoezvaFkVFkNjNCMwe9kL3Of8XCCKBgNO
W9f/H6ih+hwzeG49TONxaG8n3hE2T8CPBIL7BIL4Aw
aADwHpgHlAFvAF8SlVX9/E/O4BNSSohQBmQ7D2HsL3SLRGsEYYqiQWkR+Qb6kSsxRY7S3ySadcIL3ySYdc6lS1z2e9JLi8SYd11p
N0zCsdc4L0zMsrOSW8vBkfpmJUhgzfN1zu9/GZnEx8aXbpnNvhF+aIKtE017G59uuzOQI8uSe
67e6drVUDnL0EWNtfeWMGJ6Uq0AAich7wYHWuTH+PPfVNXjhvIzD6d0yiedcoH0yied
chkq6brO0jGvdMwJ0jOvdMxpsLy2DrwUr8V6eHgpVvBWvF6K1vBWvF6K1UtS7h5oVX0WeDbZcRhjjDHGpL+UGHYcZkxxhhjjDFeYQHvFJ
GOMMR1ZWxdjjDHGGOMMWYArALd3kO0SoxyhHyTKAa6B0rjBeByjKjDHGG
bLa+vAS/FarIeHl2IFb8XrpXbVXrpHnA+CA980rHnA
bLa+vAS/FarIeHl2IFb8XrpVg9I+XugTbGGGOMMcYyY1KR/QJ/QJtjDHGGOMMcYMgFWgA6WgaGYdLAE+o4G5O7UVK0
yTkQ2iMg3kh1Pi8LpJERFn8SKkHbb+IyHu30voJIscnoR8ZUsvmJ3pvnoNoDsR8YUjkhg8CiSRuc8Vr/KDTTNjrT+xOjaHTBdREJE8a
2yLytDs8VkT+6cb8qIIE3PEZ7vAGAGd/gAGd/qYpAbeAxEpEJHHRWStiKwTkbuEzm8vm2+4u5nq0TkERJEJe
3n7JJPXypreiMiHIrJSRJaLyJvuuGIReV5E3nX/Frnj8T/F6J+QmIgtFpFZEVnUY59lj

m3uHmtE5FzkhN139LxvJdIXipbeio/UslgyoVkG+yxnkyDPYZTNNaUW7fuNdlSEXnHjfUOd3y
P12nm0FgF2iUifuA+4FxgGvBJEZmW3Kj61Qb8u6pOA04CbnBj/gbwoqpOBF50h8HJbaL7ug64
f+hD7teNwLsdhn8A3KuqE4B64Bp3/DVAvTv+Xne+VPMT4DlVnQLMxMnLk9tGRCqBLwPHqeoMn
MfMXYG3t09SeLSs6ctHVfWYDo/J6G0fT2WLgK7PyPTksdrFIrrnBc4xe4z7ehbA3QevAKa7//
Nzd19NNel43ksIj5YtXcuPVLKIgZcLybaIAR7rKWCwx3Ay9RYrpN66jQBzVXUmcAwwX0ROovf
rNHMIrAJ9wAnABlX9QFWjwG+BBUmOqU+qWqOqb7nv9+JU0Cpx4v4v6O9uvgYd9wuAB9XxXAg
IhVDG3XvRGQEcD7wgDsswzZXFkzSL3t4ylLVV8FdnUZ7eVjFeg1r94sAH6rqhFV3QhswNlXU0q6nfcSLN3Lli
E1yHIhqQZ5rCfVQRzDSdNHrCnHLeMa3cGg+1J6v04zh8Aq0AdUAls6DG8lRQ+SnojTRHYW8E9
gmKrWuJO2AcPc96me44+Bm4G4O1wM7FbVNne4Y7z7c3GnN7jzp4qxwA7gf8Vpkv6AiGTj0F2j
qlXAj4DNOBXnBmAZ3t0+yZTS23qQFPiziCwTkTkevcccb3t417jyWN1gL7kNmde2KGZpOfySpPzX
iJ5Ldeeyo9U57XyradjPWUM8BhOCV1ihRRct+LcBrkcqAX+ArxP79dp5hBYBToNiEgO8HvgJl
Xd03GaOt2sp3xX6yJyAVCrqsuSHUuCBIBjgftVdRbQRJfmSF7Zngbpb7x3HNmWEBzhcDw4Fsem4uZo4
sp6jqsThNRm8QkdM6TvTSPt6XdMnDdT8wHqeJXw1wd1KjOUjpcN4zfZcfqc4D+1lKH+teOoZ7
iDUl162qtqvqMcAInBYpU5IbUfqyCvQBVcDIDsMj3HEptUSCOAf1w6r6au74fWnd8K
ud4MnCRiHyI0+xsLs49xAVukzi4+NbDDDkfqn7eT9m4H5rpsX8k3K+4xwy9r5gvGR4C5bK9LjBn
eqxoAncLaZV7dPMqX6th4wt2UCqloLPIlzwu5tH/carx6rfVLV7e5FVhz4JQeaaXsmrzQ67yW
ap3LtpfxIdZ4p3/o41pNukMdwUvUUayqvWwD3lsGXgTn0fp1mDoFVoA94A5jo9lYXwulMZXGS
Y+qTe0/pr4B3VfWeDpMWA1e6e768Ee6768E/thh/OfEcRLQ0KG5TFKp6i2qOkJVx+Cs+5dU9dM4BcCl7
mxdc9mX46Xu/CnzbaWqbgO2iMhkd9Q84B08uH1cm4GTRCTL/a619/fkLe3Ten6/Xz7wmmndxd0XZ/YNnpW0x
ceOBtYRe/7uNd49VjtU5f7fy/B2Wbg5HWFOD3oj8XpdGvpUMfXn3Q67x0Gnilb+ig/Up1nyrc
+jvWkOohjOGl6izUV162IlIpIgfs+EzgL557t3q7TzKFQVXu5L+A8YD3OPQO3JjueAcR7Ck4V4TF
lxXAcvd1Hs69pi8C7wEvAEXu/ILTkuVM4DT1h7DK6fBfHCGxhPPO2+H4dzEbcBeAzIcMeH3eEN7
vRxyY67hzyOAd50t88fgEIvbxvgDmAtzoniISDDy9snyevSU2VNLzmMA95xX6v35dHbPp7KL+
ARnGZ4MZzWI9d4+VjtJ6+H3LhX4FywVnSY/1Y3r3XAucmOv5ec0vK8l8D144mypbfyI5Vegyk
Xkv0a7LGe5FgHdQynaKwpt26Bo4G33ZhWAd9yx/d4nWavQ3uJu3KNMcYYY4wxxhjTB2vCbYwx
xhhjjDHGDIBVoI0xxhhjjDHGmAGwCrQxxhhjjDHGGDMAVoE2xhhjjDHGGGMGwCrQxhhjjDHGG
GPMAFgF2hhjjDHGGGOMGQCrQBvPE5FFInJp/3MaY0xichVKzZMdhjDHGmKFhFWhjjDHGG
OSSESyReQZEXlHRFaJyOUi8qGI7AVUi8qGI3CEib4nIShGZ0sf/3y4iC0XkFRH5QES+3GHaV91l
kIWPSmFWgjeeIyOdEZIV7knnIHX2aiLzmnjR6/TVaRM5wTy6Pi8haEXlXYRMSdNk9E3nZPUgtF
JGNIEjLGpBQR+fq+i08RuVdExO7mdZi0Tkp13LJ3H8OL2gXSkilx/2x
IwxqWw+UK2qM1V1BvCcO75VOVY8F7ge+1s8ypgDnACC3xaRoIjMGHwGHC
GsAm08RUSmA7cBc1V1JnCDRsfZ4ZdwEtAPGASeLSBhYBFyuqkcBAeD6A5dRDvjPZ
EJcCp7vvjgBwRCbrj1gN34FSR/rTU/n0OqEVNV
tcEd/4T7dxkwpp9lPKoOEqEVWtA2qBYThlz5Oq2qSqje7yyk9nNXOAx9+ZAqu5yx
/9BVeOqugbnhNGXpaq6jwHKcE9JkYKOqrqnfnt+TVwWqE9JkYKOqrnfn+TVwWqKDN8Z4wjJgtojkHzgV6Ko4ARBGP
CKqu5Q1Sjw6ACWnQ+p24K/A8Yl+ji7c9O2AEQnpYsbSi7HaFx1vkP5CtVN66v3+KUIEXBKx9pbspekeBtodOxdxNF9wTk0Q
0eD+Q+Y0xB8Eq0CZddDxpyCDmtROMMaYTVY0BG4GrgL/hVq7PwGnLuB1VcfRkL0dfFqC9tR1n3tdOHg2XdFf4g6h
s6r+BvghTmTMU6A4tIlohkA5e444wFxgJGZBevjDFNbt9X
DFHpiU49xu+6r7/AvA28h8DpwugbvHXMwU5BVy6QxCBMAq8vnXc3XpEFt8vAP9jb5Ja25nuyEXIHoiBYbpTtA8aQQcx5ko
IWqqpv4dyithT4/JS6i3fIxpuKFYASnhSGUSPw/BZhdpLLZO3nutL5MLHNiRi0LZtRsvP/HKZHb4QYUGSgUAACNLSPMS9ud
kYtnGGE9aAtwK/ENVm0SkfVqiqjUicidwGzAHYGXsq
l9FjOkx/Ezijj/+/vcvwjA7v7wHuSUCYxhhAVDXZMRhjjDHGWGOOMMSnPfoE2xhhjjDHGGA9zWc
jd2Gf13Vb0hGfEYcySyX6BNWhKRo4CHuoyOqOqJqY3F2PdA4vY0LffuwkmF7ndb3mnVNPsVUyiXbDaXNG4n3tyOD
gF2hhjjDHGGOMGQDrhdsYY4wxxhjjDkAq0AbY4wxxhjjjDFmAKwCYw
xxhhjjDHGDIBVoI0xxhhjjDHGmAH4f2PSeQYekWs1AAAAAElFTkSuQmCC\n",
"text/plain": [
"<Figure size 981.79x680.4 with 12 Axes>"
]
},
"metadata": {
"needs_background": "light"
},
"output_type": "display_data"
}
],
"source": [

```
    "fig = sns.pairplot(data = data, hue = \"target\", palette =
[\"#C4210E\", \"#410F01\"], height = 3.15, aspect = 1.35)\n",
    "plt.show(fig);"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 15,
   "id": "c39a74f9",
   "metadata": {
    "execution": {
     "iopub.execute_input": "2022-10-25T06:57:30.794299Z",
     "iopub.status.busy": "2022-10-25T06:57:30.793865Z",
     "iopub.status.idle": "2022-10-25T06:57:30.826635Z",
     "shell.execute_reply": "2022-10-25T06:57:30.825111Z"
    },
    "papermill": {
     "duration": 0.050621,
     "end_time": "2022-10-25T06:57:30.829424",
     "exception": false,
     "start_time": "2022-10-25T06:57:30.778803",
     "status": "completed"
    },
    "tags": []
   },
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "\u001b[2m\u001b[1m\u001b[32m\n",
      "UPPERCASE LETTERS WERE SUCCESFULLY CONVERTED INTO LOWERCASE
LETTERS...\u001b[0m\n"
     ]
    }
   ],
   "source": [
    "data[\"text\"] = data[\"text\"].apply(lambda x: \" \".join(x.lower()
for x in x.split()))\n",
    "\n",
    "print(colored(\"\\nUPPERCASE LETTERS WERE SUCCESFULLY CONVERTED INTO
LOWERCASE LETTERS...\", color = \"green\", attrs = [\"bold\",
\"dark\"]))"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 16,
   "id": "d50f380d",
   "metadata": {
    "execution": {
     "iopub.execute_input": "2022-10-25T06:57:30.858992Z",
     "iopub.status.busy": "2022-10-25T06:57:30.858616Z",
     "iopub.status.idle": "2022-10-25T06:57:30.884071Z",
     "shell.execute_reply": "2022-10-25T06:57:30.882326Z"
    },
    "papermill": {
     "duration": 0.043495,
```

```
     "end_time": "2022-10-25T06:57:30.886886",
     "exception": false,
     "start_time": "2022-10-25T06:57:30.843391",
     "status": "completed"
    },
    "tags": []
   },
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "\u001b[2m\u001b[1m\u001b[32m\n",
      "PUNCTUATION MARKS WERE SUCCESFULLY DELETED...\u001b[0m\n"
     ]
    }
   ],
   "source": [
    "data[\"text\"] = data[\"text\"].str.replace('[^\\w\\s]','')\n",
    "\n",
    "print(colored(\"\\nPUNCTUATION MARKS WERE SUCCESFULLY DELETED...\",
color = \"green\", attrs = [\"bold\", \"dark\"]))"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 17,
   "id": "ff858dff",
   "metadata": {
    "execution": {
     "iopub.execute_input": "2022-10-25T06:57:30.917743Z",
     "iopub.status.busy": "2022-10-25T06:57:30.916441Z",
     "iopub.status.idle": "2022-10-25T06:57:30.933545Z",
     "shell.execute_reply": "2022-10-25T06:57:30.932257Z"
    },
    "papermill": {
     "duration": 0.034753,
     "end_time": "2022-10-25T06:57:30.935854",
     "exception": false,
     "start_time": "2022-10-25T06:57:30.901101",
     "status": "completed"
    },
    "tags": []
   },
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "\u001b[2m\u001b[1m\u001b[32m\n",
      "NUMBERS WERE SUCCESFULLY DELETED...\u001b[0m\n"
     ]
    }
   ],
   "source": [
    "data[\"text\"] = data[\"text\"].str.replace('\\d','')\n",
    "\n",
```

```
    "print(colored(\"\\nNUMBERS WERE SUCCESFULLY DELETED...\", color =
\"green\", attrs = [\"bold\", \"dark\"]))"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 18,
   "id": "36b313c5",
   "metadata": {
    "execution": {
     "iopub.execute_input": "2022-10-25T06:57:30.965857Z",
     "iopub.status.busy": "2022-10-25T06:57:30.965012Z",
     "iopub.status.idle": "2022-10-25T06:57:31.000242Z",
     "shell.execute_reply": "2022-10-25T06:57:30.998611Z"
    },
    "papermill": {
     "duration": 0.05329,
     "end_time": "2022-10-25T06:57:31.003171",
     "exception": false,
     "start_time": "2022-10-25T06:57:30.949881",
     "status": "completed"
    },
    "tags": []
   },
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "\u001b[2m\u001b[1m\u001b[32m\n",
      "STOPWORDS AND PUNCTUATION WERE SUCCESFULLY DELETED ...\u001b[0m\n"
     ]
    }
   ],
   "source": [
    "stop_words = set(stopwords.words(\"english\"))\n",
    "punctuation = list(string.punctuation)\n",
    "stop_words.update(punctuation)\n",
    "\n",
    "data[\"text\"] = data[\"text\"].apply(lambda x: \" \".join(x for x
in x.split() if x not in stop_words))\n",
    "\n",
    "print(colored(\"\\nSTOPWORDS AND PUNCTUATION WERE SUCCESFULLY
DELETED ...\", color = \"green\", attrs = [\"bold\", \"dark\"]))"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 19,
   "id": "826a9208",
   "metadata": {
    "execution": {
     "iopub.execute_input": "2022-10-25T06:57:31.033570Z",
     "iopub.status.busy": "2022-10-25T06:57:31.033099Z",
     "iopub.status.idle": "2022-10-25T06:57:31.588999Z",
     "shell.execute_reply": "2022-10-25T06:57:31.586788Z"
    },
    "papermill": {
```

```
     "duration": 0.57384,
     "end_time": "2022-10-25T06:57:31.591369",
     "exception": true,
     "start_time": "2022-10-25T06:57:31.017529",
     "status": "failed"
    },
    "tags": []
   },
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "\n",

"**********************************************************************\n
",
      "  Resource \u001b[93momw-1.4\u001b[0m not found.\n",
      "  Please use the NLTK Downloader to obtain the resource:\n",
      "\n",
      "  \u001b[31m>>> import nltk\n",
      "  >>> nltk.download('omw-1.4')\n",
      "  \u001b[0m\n",
      "  For more information see: https://www.nltk.org/data.html\n",
      "\n",
      "  Attempted to load \u001b[93mcorpora/omw-1.4\u001b[0m\n",
      "\n",
      "  Searched in:\n",
      "    - '/root/nltk_data'\n",
      "    - '/opt/conda/nltk_data'\n",
      "    - '/opt/conda/share/nltk_data'\n",
      "    - '/opt/conda/lib/nltk_data'\n",
      "    - '/usr/share/nltk_data'\n",
      "    - '/usr/local/share/nltk_data'\n",
      "    - '/usr/lib/nltk_data'\n",
      "    - '/usr/local/lib/nltk_data'\n",

"**********************************************************************\n
",
      "\n"
     ]
    },
    {
     "ename": "MissingCorpusError",
     "evalue": "\nLooks like you are missing some required data for this
feature.\n\nTo download the necessary data, simply run\n\n    python -m
textblob.download_corpora\n\nor use the NLTK downloader to download the
missing data: http://nltk.org/data.html\nIf this doesn't fix the problem,
file an issue at https://github.com/sloria/TextBlob/issues.\n",
     "output_type": "error",
     "traceback": [
      "\u001b[0;31m-----------------------------------------------------------
--------------------\u001b[0m",
      "\u001b[0;31mLookupError\u001b[0m
Traceback (most recent call last)",
      "\u001b[0;32m/opt/conda/lib/python3.7/site-
packages/nltk/corpus/util.py\u001b[0m in
\u001b[0;36m__load\u001b[0;34m(self)\u001b[0m\n\u001b[1;32m
```

```
83\u001b[0m
\u001b[0;32mtry\u001b[0m\u001b[0;34m:\u001b[0m\u001b[0;34m\u001b[0m\u001b
[0;34m\u001b[0m\u001b[0m\n\u001b[0;32m---> 84\u001b[0;31m
\u001b[0mroot\u001b[0m \u001b[0;34m=\u001b[0m
\u001b[0mnltk\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0mdata\u001b[0m\u001b[
0;34m.\u001b[0m\u001b[0mfind\u001b[0m\u001b[0;34m(\u001b[0m\u001b[0mf\
"{self.subdir}/{zip_name}\"\u001b[0m\u001b[0;34m)\u001b[0m\u001b[0;34m\u0
01b[0m\u001b[0;34m\u001b[0m\u001b[0m\n\u001b[0m\u001b[1;32m
85\u001b[0m                  \u001b[0;32mexcept\u001b[0m
\u001b[0mLookupError\u001b[0m\u001b[0;34m:\u001b[0m\u001b[0;34m\u001b[0m\
u001b[0;34m\u001b[0m\u001b[0m\n",
      "\u001b[0;32m/opt/conda/lib/python3.7/site-
packages/nltk/data.py\u001b[0m in
\u001b[0;36mfind\u001b[0;34m(resource_name, paths)\u001b[0m\n\u001b[1;32m
582\u001b[0m     \u001b[0mresource_not_found\u001b[0m
\u001b[0;34m=\u001b[0m
\u001b[0;34mf\"\\n{sep}\\n{msg}\\n{sep}\\n\"\u001b[0m\u001b[0;34m\u001b[0
m\u001b[0;34m\u001b[0m\u001b[0m\n\u001b[0;32m--> 583\u001b[0;31m
\u001b[0;32mraise\u001b[0m
\u001b[0mLookupError\u001b[0m\u001b[0;34m(\u001b[0m\u001b[0mresource_not_
found\u001b[0m\u001b[0;34m)\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u00
1b[0m\u001b[0m\n\u001b[0m\u001b[1;32m    584\u001b[0m
\u001b[0;34m\u001b[0m\u001b[0m\n",
      "\u001b[0;31mLookupError\u001b[0m:
\n**********************************************************************\
n  Resource \u001b[93momw-1.4\u001b[0m not found.\n  Please use the NLTK
Downloader to obtain the resource:\n\n  \u001b[31m>>> import nltk\n  >>>
nltk.download('omw-1.4')\n  \u001b[0m\n  For more information see:
https://www.nltk.org/data.html\n\n  Attempted to load
\u001b[93mcorpora/omw-1.4.zip/omw-1.4/\u001b[0m\n\n  Searched in:\n    -
'/root/nltk_data'\n    - '/opt/conda/nltk_data'\n    -
'/opt/conda/share/nltk_data'\n    - '/opt/conda/lib/nltk_data'\n    -
'/usr/share/nltk_data'\n    - '/usr/local/share/nltk_data'\n    -
'/usr/lib/nltk_data'\n    -
'/usr/local/lib/nltk_data'\n**********************************************
************************\n",
      "\nDuring handling of the above exception, another exception
occurred:\n",
      "\u001b[0;31mLookupError\u001b[0m
Traceback (most recent call last)",
      "\u001b[0;32m/opt/conda/lib/python3.7/site-
packages/textblob/decorators.py\u001b[0m in
\u001b[0;36mdecorated\u001b[0;34m(*args, **kwargs)\u001b[0m\n\u001b[1;32m
34\u001b[0m
\u001b[0;32mtry\u001b[0m\u001b[0;34m:\u001b[0m\u001b[0;34m\u001b[0m\u001b
[0;34m\u001b[0m\u001b[0m\n\u001b[0;32m---> 35\u001b[0;31m
\u001b[0;32mreturn\u001b[0m
\u001b[0mfunc\u001b[0m\u001b[0;34m(\u001b[0m\u001b[0;34m*\u001b[0m\u001b[
0margs\u001b[0m\u001b[0;34m,\u001b[0m
\u001b[0;34m**\u001b[0m\u001b[0mkwargs\u001b[0m\u001b[0;34m)\u001b[0m\u00
1b[0;34m\u001b[0m\u001b[0;34m\u001b[0m\u001b[0m\n\u001b[0m\u001b[1;32m
36\u001b[0m         \u001b[0;32mexcept\u001b[0m
\u001b[0mLookupError\u001b[0m \u001b[0;32mas\u001b[0m
\u001b[0merr\u001b[0m\u001b[0;34m:\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;
34m\u001b[0m\u001b[0m\n",
      "\u001b[0;32m/opt/conda/lib/python3.7/site-
packages/textblob/blob.py\u001b[0m in
\u001b[0;36mlemmatize\u001b[0;34m(self, pos)\u001b[0m\n\u001b[1;32m
```

```
160\u001b[0m         \u001b[0;32mif\u001b[0m \u001b[0mpos\u001b[0m
\u001b[0;32mis\u001b[0m
\u001b[0;32mNone\u001b[0m\u001b[0;34m:\u001b[0m\u001b[0;34m\u001b[0m\u001
b[0;34m\u001b[0m\u001b[0m\n\u001b[0;32m--> 161\u001b[0;31m
\u001b[0mtag\u001b[0m \u001b[0;34m=\u001b[0m
\u001b[0m_wordnet\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0mNOUN\u001b[0m\u0
01b[0;34m\u001b[0m\u001b[0;34m\u001b[0m\u001b[0m\n\u001b[0m\u001b[1;32m
162\u001b[0m         \u001b[0;32melif\u001b[0m \u001b[0mpos\u001b[0m
\u001b[0;32min\u001b[0m
\u001b[0m_wordnet\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0m_FILEMAP\u001b[0
m\u001b[0;34m.\u001b[0m\u001b[0mkeys\u001b[0m\u001b[0;34m(\u001b[0m\u001b
[0;34m)\u001b[0m\u001b[0;34m:\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u
001b[0m\u001b[0m\n",
      "\u001b[0;32m/opt/conda/lib/python3.7/site-
packages/nltk/corpus/util.py\u001b[0m in
\u001b[0;36m__getattr__\u001b[0;34m(self, attr)\u001b[0m\n\u001b[1;32m
120\u001b[0m \u001b[0;34m\u001b[0m\u001b[0m\n\u001b[0;32m-->
121\u001b[0;31m
\u001b[0mself\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0m__load\u001b[0m\u001
b[0;34m(\u001b[0m\u001b[0;34m)\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\
u001b[0m\u001b[0m\n\u001b[0m\u001b[1;32m    122\u001b[0m
\u001b[0;31m# This looks circular, but its not, since __load() changes
our\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u001b[
0m\u001b[0m\n",
      "\u001b[0;32m/opt/conda/lib/python3.7/site-
packages/nltk/corpus/util.py\u001b[0m in
\u001b[0;36m__load\u001b[0;34m(self)\u001b[0m\n\u001b[1;32m
88\u001b[0m         \u001b[0;31m# Load the
corpus.\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u0
01b[0m\u001b[0m\n\u001b[0;32m---> 89\u001b[0;31m
\u001b[0mcorpus\u001b[0m \u001b[0;34m=\u001b[0m
\u001b[0mself\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0m__reader_cls\u001b[0
m\u001b[0;34m(\u001b[0m\u001b[0mroot\u001b[0m\u001b[0;34m,\u001b[0m
\u001b[0;34m*\u001b[0m\u001b[0mself\u001b[0m\u001b[0;34m.\u001b[0m\u001b[
0m__args\u001b[0m\u001b[0;34m,\u001b[0m
\u001b[0;34m**\u001b[0m\u001b[0mself\u001b[0m\u001b[0;34m.\u001b[0m\u001b
[0m__kwargs\u001b[0m\u001b[0;34m)\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;3
4m\u001b[0m\u001b[0m\n\u001b[0m\u001b[1;32m     90\u001b[0m
\u001b[0;34m\u001b[0m\u001b[0m\n",
      "\u001b[0;32m/opt/conda/lib/python3.7/site-
packages/nltk/corpus/reader/wordnet.py\u001b[0m in
\u001b[0;36m__init__\u001b[0;34m(self, root,
omw_reader)\u001b[0m\n\u001b[1;32m   1175\u001b[0m
\u001b[0;32melse\u001b[0m\u001b[0;34m:\u001b[0m\u001b[0;34m\u001b[0m\u001
b[0;34m\u001b[0m\u001b[0m\n\u001b[0;32m-> 1176\u001b[0;31m
\u001b[0mself\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0mprovenances\u001b[0m
\u001b[0;34m=\u001b[0m
\u001b[0mself\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0momw_prov\u001b[0m\u0
01b[0;34m(\u001b[0m\u001b[0;34m)\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34
m\u001b[0m\u001b[0m\n\u001b[0m\u001b[1;32m   1177\u001b[0m
\u001b[0;34m\u001b[0m\u001b[0m\n",
      "\u001b[0;32m/opt/conda/lib/python3.7/site-
packages/nltk/corpus/reader/wordnet.py\u001b[0m in
\u001b[0;36momw_prov\u001b[0;34m(self)\u001b[0m\n\u001b[1;32m
1284\u001b[0m
\u001b[0mprovdict\u001b[0m\u001b[0;34m[\u001b[0m\u001b[0;34m\"eng\"\u001b
[0m\u001b[0;34m]\u001b[0m \u001b[0;34m=\u001b[0m
\u001b[0;34m\"\"\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u001b[0m\u001b
```

```
[0m\n\u001b[0;32m-> 1285\u001b[0;31m         \u001b[0mfileids\u001b[0m
\u001b[0;34m=\u001b[0m
\u001b[0mself\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0m_omw_reader\u001b[0m
\u001b[0;34m.\u001b[0m\u001b[0mfileids\u001b[0m\u001b[0;34m(\u001b[0m\u00
1b[0;34m)\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u001b[0m\u001b[0m\n\u
001b[0m\u001b[1;32m   1286\u001b[0m         \u001b[0;32mfor\u001b[0m
\u001b[0mfileid\u001b[0m \u001b[0;32min\u001b[0m
\u001b[0mfileids\u001b[0m\u001b[0;34m:\u001b[0m\u001b[0;34m\u001b[0m\u001
b[0;34m\u001b[0m\u001b[0m\n",
      "\u001b[0;32m/opt/conda/lib/python3.7/site-
packages/nltk/corpus/util.py\u001b[0m in
\u001b[0;36m__getattr__\u001b[0;34m(self, attr)\u001b[0m\n\u001b[1;32m
120\u001b[0m \u001b[0;34m\u001b[0m\u001b[0m\n\u001b[0;32m-->
121\u001b[0;31m
\u001b[0mself\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0m__load\u001b[0m\u001
b[0;34m(\u001b[0m\u001b[0;34m)\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\
u001b[0m\u001b[0m\n\u001b[0m\u001b[1;32m    122\u001b[0m
\u001b[0;31m# This looks circular, but its not, since __load() changes
our\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u001b[
0m\u001b[0m\n",
      "\u001b[0;32m/opt/conda/lib/python3.7/site-
packages/nltk/corpus/util.py\u001b[0m in
\u001b[0;36m__load\u001b[0;34m(self)\u001b[0m\n\u001b[1;32m
85\u001b[0m                 \u001b[0;32mexcept\u001b[0m
\u001b[0mLookupError\u001b[0m\u001b[0;34m:\u001b[0m\u001b[0;34m\u001b[0m\
u001b[0;34m\u001b[0m\u001b[0m\n\u001b[0;32m---> 86\u001b[0;31m
\u001b[0;32mraise\u001b[0m
\u001b[0me\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u001b[0m\u001b[0m\n\
u001b[0m\u001b[1;32m     87\u001b[0m \u001b[0;34m\u001b[0m\u001b[0m\n",
      "\u001b[0;32m/opt/conda/lib/python3.7/site-
packages/nltk/corpus/util.py\u001b[0m in
\u001b[0;36m__load\u001b[0;34m(self)\u001b[0m\n\u001b[1;32m
80\u001b[0m
\u001b[0;32mtry\u001b[0m\u001b[0;34m:\u001b[0m\u001b[0;34m\u001b[0m\u001b
[0;34m\u001b[0m\u001b[0m\n\u001b[0;32m---> 81\u001b[0;31m
\u001b[0mroot\u001b[0m \u001b[0;34m=\u001b[0m
\u001b[0mnltk\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0mdata\u001b[0m\u001b[
0;34m.\u001b[0m\u001b[0mfind\u001b[0m\u001b[0;34m(\u001b[0m\u001b[0;34mf\
"{self.subdir}/{self.__name}\"\u001b[0m\u001b[0;34m)\u001b[0m\u001b[0;34m
\u001b[0m\u001b[0;34m\u001b[0m\u001b[0m\n\u001b[0m\u001b[1;32m
82\u001b[0m             \u001b[0;32mexcept\u001b[0m
\u001b[0mLookupError\u001b[0m \u001b[0;32mas\u001b[0m
\u001b[0me\u001b[0m\u001b[0;34m:\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34
m\u001b[0m\u001b[0m\n",
      "\u001b[0;32m/opt/conda/lib/python3.7/site-
packages/nltk/data.py\u001b[0m in
\u001b[0;36mfind\u001b[0;34m(resource_name, paths)\u001b[0m\n\u001b[1;32m
582\u001b[0m     \u001b[0mresource_not_found\u001b[0m
\u001b[0;34m=\u001b[0m
\u001b[0;34mf\"\\n{sep}\\n{msg}\\n{sep}\\n\"\u001b[0m\u001b[0;34m\u001b[0
m\u001b[0;34m\u001b[0m\u001b[0m\n\u001b[0;32m--> 583\u001b[0;31m
\u001b[0;32mraise\u001b[0m
\u001b[0mLookupError\u001b[0m\u001b[0;34m(\u001b[0m\u001b[0mresource_not_
found\u001b[0m\u001b[0;34m)\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u00
1b[0m\u001b[0m\n\u001b[0m\u001b[1;32m    584\u001b[0m
\u001b[0;34m\u001b[0m\u001b[0m\n",
      "\u001b[0;31mLookupError\u001b[0m:
\n**********************************************************************\
```

```
n  Resource \u001b[93momw-1.4\u001b[0m not found.\n  Please use the NLTK
Downloader to obtain the resource:\n\n  \u001b[31m>>> import nltk\n  >>>
nltk.download('omw-1.4')\n  \u001b[0m\n  For more information see:
https://www.nltk.org/data.html\n\n  Attempted to load
\u001b[93mcorpora/omw-1.4\u001b[0m\n\n  Searched in:\n    -
'/root/nltk_data'\n    - '/opt/conda/nltk_data'\n    -
'/opt/conda/share/nltk_data'\n    - '/opt/conda/lib/nltk_data'\n    -
'/usr/share/nltk_data'\n    - '/usr/local/share/nltk_data'\n    -
'/usr/lib/nltk_data'\n    -
'/usr/local/lib/nltk_data'\n**********************************************
************************\n",
      "\nDuring handling of the above exception, another exception
occurred:\n",
      "\u001b[0;31mMissingCorpusError\u001b[0m
Traceback (most recent call last)",
      "\u001b[0;32m/tmp/ipykernel_19/81629729.py\u001b[0m in
\u001b[0;36m<module>\u001b[0;34m\u001b[0m\n\u001b[0;32m---->
1\u001b[0;31m
\u001b[0mdata\u001b[0m\u001b[0;34m[\u001b[0m\u001b[0;34m\"text\"\u001b[0m
\u001b[0;34m]\u001b[0m \u001b[0;34m=\u001b[0m
\u001b[0mdata\u001b[0m\u001b[0;34m[\u001b[0m\u001b[0;34m\"text\"\u001b[0m
\u001b[0;34m]\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0mapply\u001b[0m\u001b
[0;34m(\u001b[0m\u001b[0;32mlambda\u001b[0m
\u001b[0mx\u001b[0m\u001b[0;34m:\u001b[0m \u001b[0;34m\"
\"\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0mjoin\u001b[0m\u001b[0;34m(\u001
b[0m\u001b[0;34m[\u001b[0m\u001b[0mWord\u001b[0m\u001b[0;34m(\u001b[0m\u0
01b[0mword\u001b[0m\u001b[0;34m)\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0ml
emmatize\u001b[0m\u001b[0;34m(\u001b[0m\u001b[0;34m)\u001b[0m
\u001b[0;32mfor\u001b[0m \u001b[0mword\u001b[0m \u001b[0;32min\u001b[0m
\u001b[0mx\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0msplit\u001b[0m\u001b[0;
34m(\u001b[0m\u001b[0;34m)\u001b[0m\u001b[0;34m]\u001b[0m\u001b[0;34m)\u0
01b[0m\u001b[0;34m)\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u001b[0m\u0
01b[0m\n\u001b[0m\u001b[1;32m      2\u001b[0m
\u001b[0;34m\u001b[0m\u001b[0m\n\u001b[1;32m      3\u001b[0m
\u001b[0mprint\u001b[0m\u001b[0;34m(\u001b[0m\u001b[0mcolored\u001b[0m\u0
01b[0;34m(\u001b[0m\u001b[0;34m\"\\nTEXTS WERE SUCCESFULLY
LEMMATIZED...\"\u001b[0m\u001b[0;34m,\u001b[0m \u001b[0mcolor\u001b[0m
\u001b[0;34m=\u001b[0m
\u001b[0;34m\"green\"\u001b[0m\u001b[0;34m,\u001b[0m
\u001b[0mattrs\u001b[0m \u001b[0;34m=\u001b[0m
\u001b[0;34m[\u001b[0m\u001b[0;34m\"bold\"\u001b[0m\u001b[0;34m,\u001b[0m
\u001b[0;34m\"dark\"\u001b[0m\u001b[0;34m]\u001b[0m\u001b[0;34m)\u001b[0m
\u001b[0;34m)\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u001b[0m\u001b[0m
\n",
      "\u001b[0;32m/opt/conda/lib/python3.7/site-
packages/pandas/core/series.py\u001b[0m in
\u001b[0;36mapply\u001b[0;34m(self, func, convert_dtype, args,
**kwargs)\u001b[0m\n\u001b[1;32m   4355\u001b[0m
\u001b[0mdtype\u001b[0m\u001b[0;34m:\u001b[0m
\u001b[0mfloat64\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u001b[0m\u001b
[0m\n\u001b[1;32m   4356\u001b[0m         \"\"\"\n\u001b[0;32m->
4357\u001b[0;31m         \u001b[0;32mreturn\u001b[0m
\u001b[0mSeriesApply\u001b[0m\u001b[0;34m(\u001b[0m\u001b[0mself\u001b[0m
\u001b[0;34m,\u001b[0m \u001b[0mfunc\u001b[0m\u001b[0;34m,\u001b[0m
\u001b[0mconvert_dtype\u001b[0m\u001b[0;34m,\u001b[0m
\u001b[0margs\u001b[0m\u001b[0;34m,\u001b[0m
\u001b[0mkwargs\u001b[0m\u001b[0;34m)\u001b[0m\u001b[0;34m.\u001b[0m\u001
b[0mapply\u001b[0m\u001b[0;34m(\u001b[0m\u001b[0;34m)\u001b[0m\u001b[0;34
```

```
m\u001b[0m\u001b[0;34m\u001b[0m\u001b[0m\n\u001b[0m\u001b[1;32m
4358\u001b[0m \u001b[0;34m\u001b[0m\u001b[0m\n\u001b[1;32m
4359\u001b[0m     def _reduce(\n",
      "\u001b[0;32m/opt/conda/lib/python3.7/site-
packages/pandas/core/apply.py\u001b[0m in
\u001b[0;36mapply\u001b[0;34m(self)\u001b[0m\n\u001b[1;32m
1041\u001b[0m             \u001b[0;32mreturn\u001b[0m
\u001b[0mself\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0mapply_str\u001b[0m\u
001b[0;34m(\u001b[0m\u001b[0;34m)\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;3
4m\u001b[0m\u001b[0m\n\u001b[1;32m   1042\u001b[0m
\u001b[0;34m\u001b[0m\u001b[0m\n\u001b[0;32m-> 1043\u001b[0;31m
\u001b[0;32mreturn\u001b[0m
\u001b[0mself\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0mapply_standard\u001b
[0m\u001b[0;34m(\u001b[0m\u001b[0;34m)\u001b[0m\u001b[0;34m\u001b[0m\u001
b[0;34m\u001b[0m\u001b[0m\n\u001b[0m\u001b[1;32m   1044\u001b[0m
\u001b[0;34m\u001b[0m\u001b[0m\n\u001b[1;32m   1045\u001b[0m
\u001b[0;32mdef\u001b[0m
\u001b[0magg\u001b[0m\u001b[0;34m(\u001b[0m\u001b[0mself\u001b[0m\u001b[0
;34m)\u001b[0m\u001b[0;34m:\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u00
1b[0m\u001b[0m\n",
      "\u001b[0;32m/opt/conda/lib/python3.7/site-
packages/pandas/core/apply.py\u001b[0m in
\u001b[0;36mapply_standard\u001b[0;34m(self)\u001b[0m\n\u001b[1;32m
1099\u001b[0m
\u001b[0mvalues\u001b[0m\u001b[0;34m,\u001b[0m\u001b[0;34m\u001b[0m\u001b
[0;34m\u001b[0m\u001b[0m\n\u001b[1;32m   1100\u001b[0m
\u001b[0mf\u001b[0m\u001b[0;34m,\u001b[0m  \u001b[0;31m# type:
ignore[arg-
type]\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u001b[0m\u001b[0m\n\u001b
[0;32m-> 1101\u001b[0;31m
\u001b[0mconvert\u001b[0m\u001b[0;34m=\u001b[0m\u001b[0mself\u001b[0m\u00
1b[0;34m.\u001b[0m\u001b[0mconvert_dtype\u001b[0m\u001b[0;34m,\u001b[0m\u
001b[0;34m\u001b[0m\u001b[0;34m\u001b[0m\n\u001b[0m\u001b[1;32m
1102\u001b[0m                 )\n\u001b[1;32m   1103\u001b[0m
\u001b[0;34m\u001b[0m\u001b[0m\n",
      "\u001b[0;32m/opt/conda/lib/python3.7/site-
packages/pandas/_libs/lib.pyx\u001b[0m in
\u001b[0;36mpandas._libs.lib.map_infer\u001b[0;34m()\u001b[0m\n",
      "\u001b[0;32m/tmp/ipykernel_19/81629729.py\u001b[0m in
\u001b[0;36m<lambda>\u001b[0;34m(x)\u001b[0m\n\u001b[0;32m---->
1\u001b[0;31m
\u001b[0mdata\u001b[0m\u001b[0;34m[\u001b[0m\u001b[0;34m\"text\"\u001b[0m
\u001b[0;34m]\u001b[0m \u001b[0;34m=\u001b[0m
\u001b[0mdata\u001b[0m\u001b[0;34m[\u001b[0m\u001b[0;34m\"text\"\u001b[0m
\u001b[0;34m]\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0mapply\u001b[0m\u001b
[0;34m(\u001b[0m\u001b[0;32mlambda\u001b[0m
\u001b[0mx\u001b[0m\u001b[0;34m:\u001b[0m \u001b[0;34m\"
\"\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0mjoin\u001b[0m\u001b[0;34m(\u001
b[0m\u001b[0;34m[\u001b[0m\u001b[0mWord\u001b[0m\u001b[0;34m(\u001b[0m\u0
01b[0mword\u001b[0m\u001b[0;34m)\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0ml
emmatize\u001b[0m\u001b[0;34m(\u001b[0m\u001b[0;34m)\u001b[0m
\u001b[0;32mfor\u001b[0m \u001b[0mword\u001b[0m \u001b[0;32min\u001b[0m
\u001b[0mx\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0msplit\u001b[0m\u001b[0;
34m(\u001b[0m\u001b[0;34m)\u001b[0m\u001b[0;34m]\u001b[0m\u001b[0;34m)\u0
01b[0m\u001b[0;34m)\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u001b[0m\u0
01b[0m\n\u001b[0m\u001b[1;32m      2\u001b[0m
\u001b[0;34m\u001b[0m\u001b[0m\n\u001b[1;32m      3\u001b[0m
\u001b[0mprint\u001b[0m\u001b[0;34m(\u001b[0m\u001b[0mcolored\u001b[0m\u0
```

```
01b[0;34m(\u001b[0m\u001b[0;34m\"\\nTEXTS WERE SUCCESFULLY
LEMMATIZED...\"\u001b[0m\u001b[0;34m,\u001b[0m \u001b[0mcolor\u001b[0m
\u001b[0;34m=\u001b[0m
\u001b[0;34m\"green\"\u001b[0m\u001b[0;34m,\u001b[0m
\u001b[0mattrs\u001b[0m \u001b[0;34m=\u001b[0m
\u001b[0;34m[\u001b[0m\u001b[0;34m\"bold\"\u001b[0m\u001b[0;34m,\u001b[0m
\u001b[0;34m\"dark\"\u001b[0m\u001b[0;34m]\u001b[0m\u001b[0;34m)\u001b[0m
\u001b[0;34m)\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u001b[0m\u001b[0m
\n",
      "\u001b[0;32m/tmp/ipykernel_19/81629729.py\u001b[0m in
\u001b[0;36m<listcomp>\u001b[0;34m(.0)\u001b[0m\n\u001b[0;32m---->
1\u001b[0;31m
\u001b[0mdata\u001b[0m\u001b[0;34m[\u001b[0m\u001b[0;34m\"text\"\u001b[0m
\u001b[0;34m]\u001b[0m \u001b[0;34m=\u001b[0m
\u001b[0mdata\u001b[0m\u001b[0;34m[\u001b[0m\u001b[0;34m\"text\"\u001b[0m
\u001b[0;34m]\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0mapply\u001b[0m\u001b
[0;34m(\u001b[0m\u001b[0;32mlambda\u001b[0m
\u001b[0mx\u001b[0m\u001b[0;34m:\u001b[0m \u001b[0;34m\"
\"\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0mjoin\u001b[0m\u001b[0;34m(\u001
b[0m\u001b[0;34m[\u001b[0m\u001b[0mWord\u001b[0m\u001b[0;34m(\u001b[0m\u0
01b[0mword\u001b[0m\u001b[0;34m)\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0ml
emmatize\u001b[0m\u001b[0;34m(\u001b[0m\u001b[0;34m)\u001b[0m
\u001b[0;32mfor\u001b[0m \u001b[0mword\u001b[0m \u001b[0;32min\u001b[0m
\u001b[0mx\u001b[0m\u001b[0;34m.\u001b[0m\u001b[0msplit\u001b[0m\u001b[0;
34m(\u001b[0m\u001b[0;34m)\u001b[0m\u001b[0;34m]\u001b[0m\u001b[0;34m)\u0
01b[0m\u001b[0;34m)\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u001b[0m\u0
01b[0m\n\u001b[0m\u001b[1;32m      2\u001b[0m
\u001b[0;34m\u001b[0m\u001b[0m\n\u001b[1;32m      3\u001b[0m
\u001b[0mprint\u001b[0m\u001b[0;34m(\u001b[0m\u001b[0mcolored\u001b[0m\u0
01b[0;34m(\u001b[0m\u001b[0;34m\"\\nTEXTS WERE SUCCESFULLY
LEMMATIZED...\"\u001b[0m\u001b[0;34m,\u001b[0m \u001b[0mcolor\u001b[0m
\u001b[0;34m=\u001b[0m
\u001b[0;34m\"green\"\u001b[0m\u001b[0;34m,\u001b[0m
\u001b[0mattrs\u001b[0m \u001b[0;34m=\u001b[0m
\u001b[0;34m[\u001b[0m\u001b[0;34m\"bold\"\u001b[0m\u001b[0;34m,\u001b[0m
\u001b[0;34m\"dark\"\u001b[0m\u001b[0;34m]\u001b[0m\u001b[0;34m)\u001b[0m
\u001b[0;34m)\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u001b[0m\u001b[0m
\n",
      "\u001b[0;32m/opt/conda/lib/python3.7/site-
packages/textblob/decorators.py\u001b[0m in
\u001b[0;36mdecorated\u001b[0;34m(*args, **kwargs)\u001b[0m\n\u001b[1;32m
36\u001b[0m         \u001b[0;32mexcept\u001b[0m
\u001b[0mLookupError\u001b[0m \u001b[0;32mas\u001b[0m
\u001b[0merr\u001b[0m\u001b[0;34m:\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;
34m\u001b[0m\u001b[0m\n\u001b[1;32m     37\u001b[0m
\u001b[0mprint\u001b[0m\u001b[0;34m(\u001b[0m\u001b[0merr\u001b[0m\u001b[
0;34m)\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u001b[0m\u001b[0m\n\u001
b[0;32m---> 38\u001b[0;31m             \u001b[0;32mraise\u001b[0m
\u001b[0mMissingCorpusError\u001b[0m\u001b[0;34m(\u001b[0m\u001b[0;34m)\u
001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u001b[0m\u001b[0m\n\u001b[1;32m
39\u001b[0m     \u001b[0;32mreturn\u001b[0m
\u001b[0mdecorated\u001b[0m\u001b[0;34m\u001b[0m\u001b[0;34m\u001b[0m\u00
1b[0m\n",
      "\u001b[0;31mMissingCorpusError\u001b[0m: \nLooks like you are
missing some required data for this feature.\n\nTo download the necessary
data, simply run\n\n    python -m textblob.download_corpora\n\nor use the
NLTK downloader to download the missing data:
```

```
http://nltk.org/data.html\nIf this doesn't fix the problem, file an issue
at https://github.com/sloria/TextBlob/issues.\n"
     ]
    }
   ],
   "source": [
    "data[\"text\"] = data[\"text\"].apply(lambda x: \"
\".join([Word(word).lemmatize() for word in x.split()]))\n",
    "\n",
    "print(colored(\"\\nTEXTS WERE SUCCESFULLY LEMMATIZED...\", color =
\"green\", attrs = [\"bold\", \"dark\"]))"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": null,
   "id": "68e18727",
   "metadata": {
    "execution": {
     "iopub.status.busy": "2022-10-25T06:53:19.857891Z",
     "iopub.status.idle": "2022-10-25T06:53:19.858325Z",
     "shell.execute_reply": "2022-10-25T06:53:19.858150Z",
     "shell.execute_reply.started": "2022-10-25T06:53:19.858131Z"
    },
    "papermill": {
     "duration": null,
     "end_time": null,
     "exception": null,
     "start_time": null,
     "status": "pending"
    },
    "tags": []
   },
   "outputs": [],
   "source": [
    "data[\"text\"] = data[\"text\"].apply(lambda x: \"
\".join(re.sub(r'http\\S+', '', x) for x in x.split()))\n",
    "\n",
    "print(colored(\"\\nURLs WERE SUCCESFULLY REMOVED...\", color =
\"green\", attrs = [\"bold\", \"dark\"]))"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": null,
   "id": "f863448d",
   "metadata": {
    "execution": {
     "iopub.status.busy": "2022-10-25T06:53:19.860536Z",
     "iopub.status.idle": "2022-10-25T06:53:19.861125Z",
     "shell.execute_reply": "2022-10-25T06:53:19.860844Z",
     "shell.execute_reply.started": "2022-10-25T06:53:19.860817Z"
    },
    "papermill": {
     "duration": null,
     "end_time": null,
     "exception": null,
     "start_time": null,
```

```
     "status": "pending"
    },
    "tags": []
   },
   "outputs": [],
   "source": [
    "data[\"text\"] = data[\"text\"].apply(lambda x: ' '.join([x for x in
x.split() if len(x) > 3]))\n",
    "\n",
    "print(colored(\"\\nWORDS LESS THAN 3 LETTERS LONG WERE SUCCESFULLY
REMOVED...\", color = \"green\", attrs = [\"bold\", \"dark\"]))"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": null,
   "id": "7ccb8a3a",
   "metadata": {
    "execution": {
     "iopub.status.busy": "2022-10-25T06:53:19.862488Z",
     "iopub.status.idle": "2022-10-25T06:53:19.863339Z",
     "shell.execute_reply": "2022-10-25T06:53:19.863073Z",
     "shell.execute_reply.started": "2022-10-25T06:53:19.863045Z"
    },
    "papermill": {
     "duration": null,
     "end_time": null,
     "exception": null,
     "start_time": null,
     "status": "pending"
    },
    "tags": []
   },
   "outputs": [],
   "source": [
    "data.head(n = 10)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": null,
   "id": "32aeb4be",
   "metadata": {
    "execution": {
     "iopub.status.busy": "2022-10-25T06:53:19.864859Z",
     "iopub.status.idle": "2022-10-25T06:53:19.865418Z",
     "shell.execute_reply": "2022-10-25T06:53:19.865162Z",
     "shell.execute_reply.started": "2022-10-25T06:53:19.865137Z"
    },
    "papermill": {
     "duration": null,
     "end_time": null,
     "exception": null,
     "start_time": null,
     "status": "pending"
    },
    "tags": []
   },
```

```
 "outputs": [],
 "source": [
  "corpus = []\n",
  "for i in data.text:\n",
  "    for j in i.split():\n",
  "        corpus.append(j.strip())"
 ]
},
{
 "cell_type": "code",
 "execution_count": null,
 "id": "7edc988c",
 "metadata": {
  "execution": {
   "iopub.status.busy": "2022-10-25T06:53:19.867418Z",
   "iopub.status.idle": "2022-10-25T06:53:19.867978Z",
   "shell.execute_reply": "2022-10-25T06:53:19.867705Z",
   "shell.execute_reply.started": "2022-10-25T06:53:19.867680Z"
  },
  "papermill": {
   "duration": null,
   "end_time": null,
   "exception": null,
   "start_time": null,
   "status": "pending"
  },
  "tags": []
 },
 "outputs": [],
 "source": [
  "counter = Counter(corpus)\n",
  "common_words = counter.most_common(15)\n",
  "dict(common_words)"
 ]
},
{
 "cell_type": "code",
 "execution_count": null,
 "id": "5c9eef54",
 "metadata": {
  "execution": {
   "iopub.status.busy": "2022-10-25T06:53:19.869738Z",
   "iopub.status.idle": "2022-10-25T06:53:19.870348Z",
   "shell.execute_reply": "2022-10-25T06:53:19.870090Z",
   "shell.execute_reply.started": "2022-10-25T06:53:19.870062Z"
  },
  "papermill": {
   "duration": null,
   "end_time": null,
   "exception": null,
   "start_time": null,
   "status": "pending"
  },
  "tags": []
 },
 "outputs": [],
 "source": [
  "text = \" \".join(i for i in data.text)\n",
```

```
    "\n",
    "wc = WordCloud(background_color = \"white\", width = 1200, height =
600,\n",
    "               contour_width = 0, contour_color = \"#410F01\",
max_words = 1000,\n",
    "               scale = 1, collocations = False, repeat = True,
min_font_size = 1)\n",
    "\n",
    "wc.generate(text)\n",
    "\n",
    "plt.figure(figsize = [15, 7])\n",
    "plt.imshow(wc)\n",
    "plt.axis(\"off\")\n",
    "plt.show"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": null,
   "id": "e87641f9",
   "metadata": {
    "execution": {
     "iopub.status.busy": "2022-10-25T06:53:19.871901Z",
     "iopub.status.idle": "2022-10-25T06:53:19.872449Z",
     "shell.execute_reply": "2022-10-25T06:53:19.872203Z",
     "shell.execute_reply.started": "2022-10-25T06:53:19.872177Z"
    },
    "papermill": {
     "duration": null,
     "end_time": null,
     "exception": null,
     "start_time": null,
     "status": "pending"
    },
    "tags": []
   },
   "outputs": [],
   "source": [
    "fig,ax = plt.subplots(figsize = (15, 8))\n",
    "text_words = data[data[\"target\"] ==
\"spam\"][\"text\"].str.split().apply(lambda x : [len(i) for i in x])\n",
    "sns.distplot(text_words.map(lambda x: np.mean(x)), color =
\"#410F01\", ax = ax).set_title(\"Distribution of average word length in
texts where target is 'spam'\");"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": null,
   "id": "75067b3e",
   "metadata": {
    "execution": {
     "iopub.status.busy": "2022-10-25T06:53:19.874149Z",
     "iopub.status.idle": "2022-10-25T06:53:19.874938Z",
     "shell.execute_reply": "2022-10-25T06:53:19.874653Z",
     "shell.execute_reply.started": "2022-10-25T06:53:19.874626Z"
    },
    "papermill": {
```

```
     "duration": null,
     "end_time": null,
     "exception": null,
     "start_time": null,
     "status": "pending"
    },
    "tags": []
   },
   "outputs": [],
   "source": [
    "fig,ax = plt.subplots(figsize = (15, 8))\n",
    "text_words = data[data[\"target\"] ==
\"ham\"][\"text\"].str.split().apply(lambda x : [len(i) for i in x])\n",
    "sns.distplot(text_words.map(lambda x: np.mean(x)), color =
\"#410F01\", ax = ax).set_title(\"Distribution of average word length in
texts where target is 'ham'\");"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": null,
   "id": "6026593a",
   "metadata": {
    "execution": {
     "iopub.status.busy": "2022-10-25T06:53:19.876816Z",
     "iopub.status.idle": "2022-10-25T06:53:19.877610Z",
     "shell.execute_reply": "2022-10-25T06:53:19.877404Z",
     "shell.execute_reply.started": "2022-10-25T06:53:19.877365Z"
    },
    "papermill": {
     "duration": null,
     "end_time": null,
     "exception": null,
     "start_time": null,
     "status": "pending"
    },
    "tags": []
   },
   "outputs": [],
   "source": [
    "lb = LabelEncoder()\n",
    "data[\"target\"] = lb.fit_transform(data[\"target\"])"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": null,
   "id": "f0774d71",
   "metadata": {
    "execution": {
     "iopub.status.busy": "2022-10-25T06:53:19.879023Z",
     "iopub.status.idle": "2022-10-25T06:53:19.879970Z",
     "shell.execute_reply": "2022-10-25T06:53:19.879757Z",
     "shell.execute_reply.started": "2022-10-25T06:53:19.879735Z"
    },
    "papermill": {
     "duration": null,
     "end_time": null,
```

```
     "exception": null,
     "start_time": null,
     "status": "pending"
    },
    "tags": []
   },
   "outputs": [],
   "source": [
    "x = data[\"text\"]\n",
    "y = data[\"target\"]\n",
    "\n",
    "train_x, test_x, train_y, test_y = train_test_split(x, y, test_size
= 0.20, shuffle = True, random_state = 11)\n",
    "\n",
    "print(colored(\"\\nDATASET WAS SUCCESFULLY DIVIDED ...\", color =
\"green\", attrs = [\"bold\", \"dark\"]))"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": null,
   "id": "c2027779",
   "metadata": {
    "execution": {
     "iopub.status.busy": "2022-10-25T06:53:19.881248Z",
     "iopub.status.idle": "2022-10-25T06:53:19.882102Z",
     "shell.execute_reply": "2022-10-25T06:53:19.881871Z",
     "shell.execute_reply.started": "2022-10-25T06:53:19.881850Z"
    },
    "papermill": {
     "duration": null,
     "end_time": null,
     "exception": null,
     "start_time": null,
     "status": "pending"
    },
    "tags": []
   },
   "outputs": [],
   "source": [
    "print(\"The shape of 'train_x' is {} and the shape of 'test_x' is
{}\".format(train_x.shape[0], test_x.shape[0]))"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": null,
   "id": "5c977308",
   "metadata": {
    "execution": {
     "iopub.status.busy": "2022-10-25T06:53:19.883582Z",
     "iopub.status.idle": "2022-10-25T06:53:19.884013Z",
     "shell.execute_reply": "2022-10-25T06:53:19.883809Z",
     "shell.execute_reply.started": "2022-10-25T06:53:19.883790Z"
    },
    "papermill": {
     "duration": null,
     "end_time": null,
```

```
     "exception": null,
     "start_time": null,
     "status": "pending"
    },
    "tags": []
   },
   "outputs": [],
   "source": [
    "tokenizer = Tokenizer(num_words = None)\n",
    "tokenizer.fit_on_texts(train_x)\n",
    "\n",
    "tokenized_train = tokenizer.texts_to_sequences(train_x)\n",
    "tokenized_test = tokenizer.texts_to_sequences(test_x)\n",
    "\n",
    "train_x = sequence.pad_sequences(tokenized_train, maxlen = None)\n",
    "test_x = sequence.pad_sequences(tokenized_test, maxlen = None)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": null,
   "id": "1ce9934b",
   "metadata": {
    "execution": {
     "iopub.status.busy": "2022-10-25T06:53:19.885739Z",
     "iopub.status.idle": "2022-10-25T06:53:19.886731Z",
     "shell.execute_reply": "2022-10-25T06:53:19.886511Z",
     "shell.execute_reply.started": "2022-10-25T06:53:19.886475Z"
    },
    "papermill": {
     "duration": null,
     "end_time": null,
     "exception": null,
     "start_time": null,
     "status": "pending"
    },
    "tags": []
   },
   "outputs": [],
   "source": [
    "GLOVE_EMBEDDING = \"../input/glove-
twitter/glove.twitter.27B.100d.txt\""
   ]
  },
  {
   "cell_type": "code",
   "execution_count": null,
   "id": "43fa041f",
   "metadata": {
    "execution": {
     "iopub.status.busy": "2022-10-25T06:53:19.888408Z",
     "iopub.status.idle": "2022-10-25T06:53:19.889225Z",
     "shell.execute_reply": "2022-10-25T06:53:19.889034Z",
     "shell.execute_reply.started": "2022-10-25T06:53:19.889013Z"
    },
    "papermill": {
     "duration": null,
     "end_time": null,
```

```
     "exception": null,
     "start_time": null,
     "status": "pending"
    },
    "tags": []
   },
   "outputs": [],
   "source": [
    "def get_coefs(word, *arr):\n",
    "    return word, np.asarray(arr, dtype = \"float32\")\n",
    "embeddings_index = dict(get_coefs(*g.rstrip().rsplit(\" \")) for g
in open(GLOVE_EMBEDDING))\n",
    "\n",

"#_____________________________________________________________________________
_____________________#\n",
    "\n",

"#_____________________________________________________________________________
_____________________#\n",
    "\n",
    "embeddings = np.stack(embeddings_index.values())\n",
    "embedding_mean, embedding_std = embeddings.mean(),
embeddings.std()\n",
    "embedding_size = embeddings.shape[1]\n",
    "\n",
    "word_index = tokenizer.word_index\n",
    "nb_words = min(6012, len(word_index))+1\n",
    "\n",
    "embedding_matrix = embedding_matrix =
np.random.normal(embedding_mean, embedding_std, (nb_words,
embedding_size))\n",
    "for word, i in word_index.items():\n",
    "    if i >= 6012:\n",
    "        continue\n",
    "    embedding_vector = embeddings_index.get(word)\n",
    "    if embedding_vector is not None:\n",
    "        embedding_matrix[i] = embedding_vector"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": null,
   "id": "1992a040",
   "metadata": {
    "execution": {
     "iopub.status.busy": "2022-10-25T06:53:19.890281Z",
     "iopub.status.idle": "2022-10-25T06:53:19.891105Z",
     "shell.execute_reply": "2022-10-25T06:53:19.890869Z",
     "shell.execute_reply.started": "2022-10-25T06:53:19.890848Z"
    },
    "papermill": {
     "duration": null,
     "end_time": null,
     "exception": null,
     "start_time": null,
     "status": "pending"
    },
```

```
    "tags": []
   },
   "outputs": [],
   "source": [
    "lr_reduce = ReduceLROnPlateau(monitor = \"val_accuracy\", patience =
2, factor = 0.5, min_lr = 0.00001)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": null,
   "id": "f95b3782",
   "metadata": {
    "execution": {
     "iopub.status.busy": "2022-10-25T06:53:19.892486Z",
     "iopub.status.idle": "2022-10-25T06:53:19.893291Z",
     "shell.execute_reply": "2022-10-25T06:53:19.893103Z",
     "shell.execute_reply.started": "2022-10-25T06:53:19.893082Z"
    },
    "papermill": {
     "duration": null,
     "end_time": null,
     "exception": null,
     "start_time": null,
     "status": "pending"
    },
    "tags": []
   },
   "outputs": [],
   "source": [
    "model = Sequential()\n",
    "\n",
    "model.add(Embedding(6013, output_dim = 100, weights =
[embedding_matrix], trainable = False))\n",
    "\n",
    "model.add(LSTM(units = 128, return_sequences = True,
recurrent_dropout = 0.3, dropout = 0.5))\n",
    "\n",
    "model.add(LSTM(units = 64, recurrent_dropout = 0.3, dropout =
0.5))\n",
    "\n",
    "model.add(Dense(units = 32, activation = \"relu\"))\n",
    "\n",
    "model.add(Dense(1, activation = \"sigmoid\"))\n",
    "\n",
    "model.compile(optimizer = tf.keras.optimizers.Adam(lr = 0.01), loss
= \"binary_crossentropy\", metrics = [\"accuracy\"])"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": null,
   "id": "860fc8c2",
   "metadata": {
    "execution": {
     "iopub.status.busy": "2022-10-25T06:53:19.894779Z",
     "iopub.status.idle": "2022-10-25T06:53:19.895750Z",
     "shell.execute_reply": "2022-10-25T06:53:19.895560Z",
```

```
    "shell.execute_reply.started": "2022-10-25T06:53:19.895539Z"
   },
   "papermill": {
    "duration": null,
    "end_time": null,
    "exception": null,
    "start_time": null,
    "status": "pending"
   },
   "tags": []
  },
  "outputs": [],
  "source": [
   "model.summary()"
  ]
 },
 {
  "cell_type": "code",
  "execution_count": null,
  "id": "3ec12f81",
  "metadata": {
   "execution": {
    "iopub.status.busy": "2022-10-25T06:53:19.897009Z",
    "iopub.status.idle": "2022-10-25T06:53:19.897804Z",
    "shell.execute_reply": "2022-10-25T06:53:19.897607Z",
    "shell.execute_reply.started": "2022-10-25T06:53:19.897587Z"
   },
   "papermill": {
    "duration": null,
    "end_time": null,
    "exception": null,
    "start_time": null,
    "status": "pending"
   },
   "tags": []
  },
  "outputs": [],
  "source": [
   "history = model.fit(train_x,\n",
   "                    train_y,\n",
   "                    batch_size = 64,\n",
   "                    validation_data = (test_x, test_y),\n",
   "                    epochs = 20,\n",
   "                    callbacks = [lr_reduce])"
  ]
 },
 {
  "cell_type": "code",
  "execution_count": null,
  "id": "a2df88c1",
  "metadata": {
   "execution": {
    "iopub.status.busy": "2022-10-25T06:53:19.899248Z",
    "iopub.status.idle": "2022-10-25T06:53:19.900238Z",
    "shell.execute_reply": "2022-10-25T06:53:19.900034Z",
    "shell.execute_reply.started": "2022-10-25T06:53:19.900007Z"
   },
   "papermill": {
```

```
     "duration": null,
     "end_time": null,
     "exception": null,
     "start_time": null,
     "status": "pending"
    },
    "tags": []
   },
   "outputs": [],
   "source": [
    "print(\"Model accuracy on the train set: \", model.evaluate(train_x,
train_y)[1])\n",
    "print(\"Model accuracy on the test set: \", model.evaluate(test_x,
test_y)[1])"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": null,
   "id": "d3e851d5",
   "metadata": {
    "execution": {
     "iopub.status.busy": "2022-10-25T06:53:19.901486Z",
     "iopub.status.idle": "2022-10-25T06:53:19.903072Z",
     "shell.execute_reply": "2022-10-25T06:53:19.902837Z",
     "shell.execute_reply.started": "2022-10-25T06:53:19.902816Z"
    },
    "papermill": {
     "duration": null,
     "end_time": null,
     "exception": null,
     "start_time": null,
     "status": "pending"
    },
    "tags": []
   },
   "outputs": [],
   "source": [
    "epochs = [i for i in range(20)]\n",
    "\n",
    "fig, ax = plt.subplots(1, 2)\n",
    "train_acc = history.history[\"accuracy\"]\n",
    "train_loss = history.history[\"loss\"]\n",
    "val_acc = history.history[\"val_accuracy\"]\n",
    "val_loss = history.history[\"val_loss\"]\n",
    "fig.set_size_inches(20, 10)\n",
    "\n",
    "ax[0].plot(epochs, train_acc, \"go-\", label = \"Train
accuracy\")\n",
    "ax[0].plot(epochs, val_acc, \"ro-\", label = \"Test accuracy\")\n",
    "ax[0].set_title(\"Train and test accuracy\")\n",
    "ax[0].legend()\n",
    "ax[0].set_xlabel(\"Epochs\")\n",
    "ax[0].set_ylabel(\"Accuracy\")\n",
    "\n",
    "ax[1].plot(epochs, train_loss, \"go-\", label = \"Train loss\")\n",
    "ax[1].plot(epochs, val_loss, \"ro-\", label = \"Test loss\")\n",
    "ax[1].set_title(\"Train and test loss\")\n",
```

```
  "ax[1].legend()\n",
  "ax[1].set_xlabel(\"Epochs\")\n",
  "ax[1].set_ylabel(\"Loss\")\n",
  "plt.show()"
 ]
},
{
 "cell_type": "code",
 "execution_count": null,
 "id": "d71d3b3f",
 "metadata": {
  "execution": {
   "iopub.status.busy": "2022-10-25T06:53:19.904453Z",
   "iopub.status.idle": "2022-10-25T06:53:19.904846Z",
   "shell.execute_reply": "2022-10-25T06:53:19.904677Z",
   "shell.execute_reply.started": "2022-10-25T06:53:19.904658Z"
  },
  "papermill": {
   "duration": null,
   "end_time": null,
   "exception": null,
   "start_time": null,
   "status": "pending"
  },
  "tags": []
 },
 "outputs": [],
 "source": [
  "prediction = model.predict(test_x)\n",
  "classes_pred = np.argmax(prediction, axis = 1)\n",
  "\n",
  "print(classification_report(test_y, classes_pred))"
 ]
},
{
 "cell_type": "code",
 "execution_count": null,
 "id": "41dd7b09",
 "metadata": {
  "execution": {
   "iopub.status.busy": "2022-10-25T06:53:19.906337Z",
   "iopub.status.idle": "2022-10-25T06:53:19.906736Z",
   "shell.execute_reply": "2022-10-25T06:53:19.906555Z",
   "shell.execute_reply.started": "2022-10-25T06:53:19.906536Z"
  },
  "papermill": {
   "duration": null,
   "end_time": null,
   "exception": null,
   "start_time": null,
   "status": "pending"
  },
  "tags": []
 },
 "outputs": [],
 "source": [
  "conf_mat = confusion_matrix(test_y, classes_pred)\n",
  "print(conf_mat)\n",
```

```
    "\n",
    "sns.heatmap(conf_mat, square = True, annot = True, robust =
True)\n",
    "plt.show()"
   ]
  }
 ],
 "metadata": {
  "kernelspec": {
   "display_name": "Python 3",
   "language": "python",
   "name": "python3"
  },
  "language_info": {
   "codemirror_mode": {
    "name": "ipython",
    "version": 3
   },
   "file_extension": ".py",
   "mimetype": "text/x-python",
   "name": "python",
   "nbconvert_exporter": "python",
   "pygments_lexer": "ipython3",
   "version": "3.7.12"
  },
  "papermill": {
   "default_parameters": {},
   "duration": 89.243179,
   "end_time": "2022-10-25T06:57:34.236039",
   "environment_variables": {},
   "exception": true,
   "input_path": "__notebook__.ipynb",
   "output_path": "__notebook__.ipynb",
   "parameters": {},
   "start_time": "2022-10-25T06:56:04.992860",
   "version": "2.3.4"
  }
 },
 "nbformat": 4,
 "nbformat_minor": 5
}
```