Assignment -3

Python Programming

Assignment Date	29 September 2022
Student Name	Sureka S
Student Roll Number	19BCS4117
Maximum Marks	2 Marks


```
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    "## Exercises\n",
    "\n",
    "Answer the questions or complete the tasks outlined in bold below, use the specific method described if applicable."
   ]
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  {
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    "** What is 7 to the power of 4?**"
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```

```
        "2401"
       ]
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  "source": [
    "#pow(7, 4)\n",
    "7 ** 4"
  ]
 },
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  },
  "source": [
    "** Split this string:**\n",
    "\n",
    "    s = \"Hi there Sam!\"\n",
    "    \n",
    "**into a list. **"
  ]
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    "s = \"Hi there Sam!\"\n",
    "l1 = s.split()"
  ]
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```

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   }
  },
  "outputs": [
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    "name": "stdout",
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     "['Hi', 'there', 'Sam!']\n"
    ]
   }
  ],
  "source": [
   "print(l1)"
  ]
 },
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   "** Given the variables:**\n",
   "\n",
   "    planet = \"Earth\"\n",
   "    diameter = 12742\n",
   "\n",
   "** Use .format() to print the following string: **\n",
   "\n",
   "    The diameter of Earth is 12742 kilometers."
  ]
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  "outputs": [
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    "output_type": "execute_result",
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    "data": {
     "text/plain": [
      "'The diameter of Earth is 12742 kilometers'"
     ],
     "application/vnd.google.colaboratory.intrinsic+json": {
      "type": "string"
     }
    },
    "metadata": {},
    "execution_count": 5
   }
  ],
  "source": [
   "planet = \"Earth\"\n",
   "diameter = 12742\n",
   "input_s = \"The diameter of {} is {} kilometers\"\n",
   "input_s.format(planet, diameter)"
  ]
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    "data": {
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      "'The diameter of Earth is 12742 kilometers'"
     ],
     "application/vnd.google.colaboratory.intrinsic+json": {
      "type": "string"
     }
    },
    "metadata": {},
    "execution_count": 7
   }
  ],
  "source": [
```

```
   "input_s.format(planet, diameter)"
  ]
 },
 {
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   "** Given this nested list, use indexing to grab the word \"hello\" **"
  ]
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   "lst = [1,2,[3,4],[5,[100,200,['hello']],23,11],1,7]\n"
  ]
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   }
  },
  "outputs": [
   {
    "output_type": "stream",
    "name": "stdout",
    "text": [
     "hello\n"
    ]
   }
  ],
  "source": [
   "print(lst[3][1][2][0])"
  ]
```

```
   },
   {
    "cell_type": "markdown",
    "metadata": {
     "id": "9Ma7M4a185kF"
    },
    "source": [
     "** Given this nest dictionary grab the word \"hello\". Be prepared, this will be annoying/tricky
**"
    ]
   },
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    "cell_type": "code",
    "execution_count": 4,
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    },
    "outputs": [],
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     "d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}"
    ]
   },
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     }
    },
    "outputs": [
     {
      "output_type": "execute_result",
      "data": {
       "text/plain": [
        "'hello'"
       ],
       "application/vnd.google.colaboratory.intrinsic+json": {
        "type": "string"
       }
      },
      "metadata": {},
      "execution_count": 23
```

```
   }
  ],
  "source": [
   "d['k1'][3]['tricky'][3]['target'][3]"
  ]
 },
 {
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  "source": [
   "** What is the main difference between a tuple and a list? **"
  ]
 },
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  "metadata": {
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  },
  "outputs": [],
  "source": [
   "thisdict = {\n",
   "  \"brand\": \"Ford\",\n",
   "  \"model\": \"Mustang\",\n",
   "  \"year\": 1964\n",
   "}"
  ]
 },
 {
  "cell_type": "markdown",
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  },
  "source": [
   "** Create a function that grabs the email website domain from a string in the form: **\n",
   "\n",
   "    user@domain.com\n",
   "    \n",
   "**So for example, passing \"user@domain.com\" would return: domain.com**"
  ]
 },
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```

```
 "execution_count": 39,
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 "source": [
  "def getDomain(email):\n",
  "  return email[email.index('@') + 1:]"
 ]
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   "data": {
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     "'domain.com'"
    ],
    "application/vnd.google.colaboratory.intrinsic+json": {
     "type": "string"
    }
   },
   "metadata": {},
   "execution_count": 40
  }
 ],
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  "getDomain(\"user@domain.com\")"
 ]
},
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 },
```

```
    "source": [
     "** Create a basic function that returns True if the word 'dog' is contained in the input string. Don't worry about edge cases like a punctuation being attached to the word dog, but do account for capitalization. **"
    ]
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    },
    "outputs": [],
    "source": [
     "#def check(input):\n",
     " # if(input.__contains__('dog')):\n",
     "  #  return True\n",
     "  #else:\n",
     "    # return False \n",
     "#input = \"The dog is the most loveable animal in the world\"\n",
     "#check(input)\n",
     "def findDog(st):\n",
     "    return 'dog' in st.lower().split()"
    ]
   },
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      "data": {
       "text/plain": [
        "True"
       ]
      },
      "metadata": {},
      "execution_count": 38
```

```
    }
   ],
   "source": [
    "findDog('Is there a dog here?')"
   ]
  },
  {
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    "id": "AyHQFALC85kO"
   },
   "source": [
    "** Create a function that counts the number of times the word \"dog\" occurs in a string. Again ignore edge cases. **"
   ]
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   },
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   "source": [
    "def countDog(st):\n",
    "    count = 0\n",
    "    for word in st.lower().split():\n",
    "        if word == 'dog':\n",
    "            count += 1\n",
    "    return count"
   ]
  },
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```

```
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         "2"
        ]
       },
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       "execution_count": 36
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     ],
     "source": [
      "countDog('This dog runs faster than the other dog')"
     ]
    },
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     },
     "source": [
      "### Problem\n",
      "**You are driving a little too fast, and a police officer stops you. Write a function\n",
      "  to return one of 3 possible results: \"No ticket\", \"Small ticket\", or \"Big Ticket\". \n",
      "  If your speed is 60 or less, the result is \"No Ticket\". If speed is between 61 \n",
      "  and 80 inclusive, the result is \"Small Ticket\". If speed is 81 or more, the result is \"Big  Ticket\". Unless it is your birthday (encoded as a boolean value in the parameters of the function) -- on your birthday, your speed can be 5 higher in all \n",
      "  cases. **"
     ]
    },
    {
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     "execution_count": 32,
     "metadata": {
      "collapsed": true,
      "id": "nvXMkvWk85kQ"
     },
     "outputs": [],
     "source": [
      "def caught_speeding(speed, is_birthday):\n",
      "    \n",
      "    if is_birthday:\n",
      "        speeding = speed - 5\n",
      "    else:\n",
      "        speeding = speed\n",
      "    \n",
      "    if speeding > 80:\n",
      "        return 'Big Ticket'\n",
```

```
    "    elif speeding > 60:\n",
    "        return 'Small Ticket'\n",
    "    else:\n",
    "        return 'No Ticket'"
   ]
  },
  {
   "cell_type": "code",
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    }
   },
   "outputs": [
    {
     "output_type": "execute_result",
     "data": {
      "text/plain": [
       "'Big Ticket'"
      ],
      "application/vnd.google.colaboratory.intrinsic+json": {
       "type": "string"
      }
     },
     "metadata": {},
     "execution_count": 33
    }
   ],
   "source": [
    "caught_speeding(81, False)"
   ]
  },
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    "colab": {
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     "height": 36
    }
```

```
    },
    "outputs": [
     {
      "output_type": "execute_result",
      "data": {
       "text/plain": [
        "'Small Ticket'"
       ],
       "application/vnd.google.colaboratory.intrinsic+json": {
        "type": "string"
       }
      },
      "metadata": {},
      "execution_count": 34
     }
    ],
    "source": [
     "caught_speeding(81, True)"
    ]
   },
   {
    "cell_type": "markdown",
    "source": [
     "Create an employee list with basic salary values(at least 5 values for 5 employees)  and using a for loop retreive each employee salary and calculate total salary expenditure. "
    ],
    "metadata": {
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    }
   },
   {
    "cell_type": "code",
    "source": [
     "emp_list = [120000, 150000, 90000, 45000, 28000]\n",
     "salary_expenditure = 0\n",
     "for i in emp_list:\n",
     "  salary_expenditure += i\n",
     "print(salary_expenditure)"
    ],
    "metadata": {
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    "433000\n"
   ]
  }
 ]
},
{
 "cell_type": "markdown",
 "source": [
  "Create two dictionaries in Python:\n",
  "\n",
  "First one to contain fields as Empid,  Empname,  Basicpay\n",
  "\n",
  "Second dictionary to contain fields as DeptName,  DeptId.\n",
  "\n",
  "Combine both dictionaries. "
 ],
 "metadata": {
  "id": "-L1aiFqRkF5s"
 }
},
{
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 "source": [
  "dict1 = { \"Empid\" : 1,\n",
  "         \"Empname\" : \"abc\",\n",
  "         \"Basicpay\" : 1200\n",
  "        }\n",
  "dict2 = { \"DeptName\" : \"CSE\",\n",
  "         \"DeptId\" : 1,\n",
  "        }   \n",
  "print({**dict1, **dict2})"
 ],
 "metadata": {
  "id": "8ugVoEe0kOsk",
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 },
 "execution_count": null,
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```
    "outputs": [
     {
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      "name": "stdout",
      "text": [
       "{'Empid': 1, 'Empname': 'abc', 'Basicpay': 1200, 'DeptName': 'CSE', 'DeptId': 1}\n"
      ]
     }
    ]
   }
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    "name": "python3"
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   }
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