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   "display_name": "Python 3"
  },
  "language_info": {
   "name": "python"
  }
 },
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  {
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    "##TEST THE MODEL"
   ],
   "metadata": {
    "id": "TOEya1fQlR48"
   }
  },
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```
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 "source": [
  "!unzip '/content/drive/MyDrive/IBMPROJECT/conversation engine for deaf and dumb.zip'"
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 "metadata": {
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 "execution_count": null,
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 "execution_count": 1,
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 },
 "outputs": [],
 "source": [
  "from tensorflow.keras.models import load_model\n",
  "from tensorflow.keras.preprocessing import image\n",
  "import numpy as np\n",
  "import cv2"
 ]
},
```

```
{
 "cell_type": "code",
 "source": [
  "model = load_model('/content/Real_time.h5')"
 ],
 "metadata": {
  "id": "-nDN6iyWkd9L"
 },
 "execution_count": 8,
 "outputs": []
},
{
 "cell_type": "code",
 "source": [
  "img = image.load_img('/content/Dataset/test_set/H/107.png',target_size = (100,100))\n",
  "img"
 ],
 "metadata": {
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   "base_uri": "https://localhost:8080/",
   "height": 117
  },
  "id": "UZtwzfSvkGyu",
  "outputId": "9b75f8f7-1e2a-42ad-e56b-7bff672fef6d"
 },
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```
   "execution_count": 9,
   "outputs": [
    {
     "output_type": "execute_result",
     "data": {
      "text/plain": [
       "<PIL.Image.Image image mode=RGB size=100x100 at 0x7F2D37E9B190>"
      ],
      "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAGQAAABkCAIAAAD/gAIDAAAC4UlEQVR4nO3cvUrzUBgH8Oe8vEOK0E
Jw8AN0k4YM2UQyZXTo4Ngr8BKKl1AnL8ALaKFD6SDBNSCiizrpFXTplskhmHc4r7FEanrydZ7U/2+KtT15eHj+
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     "metadata": {},
     "execution_count": 9
    }
   ]
  },
  {
   "cell_type": "code",
   "source": [
```

```
   "from skimage.transform import resize\n",
   "def detect(frame):\n",
   "    img=image.img_to_array(frame)\n",
   "    img = resize(img,(64,64,1))\n",
   "    img = np.expand_dims(img,axis=0)\n",
   "    pred=np.argmax(model.predict(img))\n",
   "    op=['A','B','C','D','E','F','G','H','I']\n",
   "    print(\"THE PREDICTED LETTER IS \",op[pred])"
  ],
  "metadata": {
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  },
  "execution_count": 10,
  "outputs": []
 },
 {
  "cell_type": "code",
  "source": [
   "img=image.load_img(\"/content/Dataset/test_set/H/107.png\")\n",
   "detect(img)"
  ],
  "metadata": {
   "colab": {
    "base_uri": "https://localhost:8080/"
   },
```

```
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  },
  "execution_count": 11,
  "outputs": [
   {
    "output_type": "stream",
    "name": "stdout",
    "text": [
     "1/1 [==============================] - 0s 412ms/step\n",
     "THE PREDICTED LETTER IS  H\n"
    ]
   }
  ]
 },
 {
  "cell_type": "code",
  "source": [
   "img = image.load_img('/content/Dataset/test_set/A/110.png')\n",
   "pred=detect(img)"
  ],
  "metadata": {
   "colab": {
    "base_uri": "https://localhost:8080/"
   },
```

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  },
  "execution_count": 12,
  "outputs": [
   {
    "output_type": "stream",
    "name": "stdout",
    "text": [
     "1/1 [==============================] - 0s 23ms/step\n",
     "THE PREDICTED LETTER IS  A\n"
    ]
   }
  ]
 },
 {
  "cell_type": "code",
  "source": [
   "img=image.load_img('/content/Dataset/test_set/F/108.png')\n",
   "detect(img)"
  ],
  "metadata": {
   "colab": {
    "base_uri": "https://localhost:8080/"
   },
```

```
      "id": "GR9O89jXkVuf",
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    },
    "execution_count": 14,
    "outputs": [
     {
      "output_type": "stream",
      "name": "stdout",
      "text": [
       "1/1 [==============================] - 0s 25ms/step\n",
       "THE PREDICTED LETTER IS  F\n"
      ]
     }
    ]
   }
  ]
}
```