

Assignment Date	10 October 2022
Student Name	K.Rajasri
Student Roll Number	113219041091
Maximum Marks	2 Marks

```
{
  "cells": [
    {
      "cell_type": "markdown",
      "source": [
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        "Student Name\t : SHARMILA S\n",
        "Student Roll Number: 113219041302\n",
        "Maximum Marks\t : 2 Marks\n",
        "\n",
        "\n"
      ],
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      },
    },
    {
      "source": [
        "## 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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```

```
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```

```
},
```

```
"source": [
```

```
"* What is 7 to the power of 4?*"
```

```
]
```

```
},
```

```
{
```

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```

```
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```

```
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```

```
}
```

```
},
```

```
"outputs": [
```

```
{
```

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```

```
"data": {
```

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        "2401"  
    ]  
},  
"metadata": {},  
"execution_count": 7  
}  
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    "7**4"  
]  
},  
{  
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    "metadata": {  
        "id": "ds8G9S8j85j6"  
    },  
    "source": [  
        "* Split this string:*\\n",  
        "\\n",  
        "    s = \\\"Hi there Sam!\\\"\\n",  
        "    \\n",  
        "*into a list. *"  
    ]  
},  
{  
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```

```
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},  
"outputs": [],  
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  "s=\"Hi there Sum!\"\n",  
  "x=s.split()  
]  
},  
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    }  
  },  
  "outputs": [  
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      "output_type": "stream",  
      "name": "stdout",  
      "text": [  
        "['Hi', 'there', 'Sum!']\n"
```

```
    ]
  }
],
"source": [
  "print(x)"
],
},
{
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  "metadata": {
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  },
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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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  "execution_count": 10,
  "metadata": {
```

```
"collapsed": true,
"id": "2TrzmDcS85j-",
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"source": [
  "planet=\"Earth\"\\n",
  "diameter=12742"
]
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    "colab": {
      "base_uri": "https://localhost:8080/"
    }
  },
  "outputs": [
    {
      "output_type": "stream",
      "name": "stdout",
      "text": [
        "The diameter of Earth is 12742 kilometers.\\n"
      ]
    }
  ]
}
```

```

    ],
    "source": [
        "print(\"The diameter of \"+str(planet)+\" is \"+str(diameter)+\"
kilometers.\")"
    ]
},
{
    "cell_type": "markdown",
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        "* Given this nested list, use indexing to grab the word \"hello\" *"
    ]
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        "id": "-7dzQDyK85kD"
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        "lst = [1,2,[3,4],[5,[100,200,['hello']],23,11],1,7]"
    ]
},
{

```

```
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  "outputId": "1f768d09-5f2c-4742-90f2-63762b99e001",
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    "height": 35
  }
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  {
    "output_type": "execute_result",
    "data": {
      "text/plain": [
        "'hello'"
      ],
      "application/vnd.google.colaboratory.intrinsic+json": {
        "type": "string"
      }
    },
    "metadata": {},
    "execution_count": 13
  }
],
"source": [
  "lst[3][1][2][0]\n"
```



```

    ]
  },
  {
    "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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    "execution_count": 14,
    "metadata": {
      "id": "vrYAxSYN85kG"
    },
    "outputs": [],
    "source": [
      "d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}"
    ]
  },
  {
    "cell_type": "code",
    "execution_count": 15,
    "metadata": {
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```

```
"outputId": "790505fc-7fe2-46ec-f5c5-08a0e1be8614",
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  "height": 35
}
},
"outputs": [
  {
    "output_type": "execute_result",
    "data": {
      "text/plain": [
        "'hello'"
      ],
      "application/vnd.google.colaboratory.intrinsic+json": {
        "type": "string"
      }
    },
    "metadata": {},
    "execution_count": 15
  }
],
"source": [
  "d['k1']][3]['tricky']][3]['target']][3]\n"
],
{
  "cell_type": "markdown",
```

```
"metadata": {
  "id": "FInV_FKB85kI"
},
"source": [
  "* What is the main difference between a tuple and a list? *"
]
},
{
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  "metadata": {
    "collapsed": true,
    "id": "_VBWf00q85kJ"
  },
  "outputs": [],
  "source": [
    "# Tuple is immutable and list is mutable "
  ]
},
{
  "cell_type": "markdown",
  "metadata": {
    "id": "zP-j0HZj85kK"
  },
  "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": 17,
```

```
  "metadata": {
```

```
    "collapsed": true,
```

```
    "id": "unvEAwjK85kL"
```

```
  },
```

```
  "outputs": [],
```

```
  "source": [
```

```
    "def domainGet(input):\n",
```

```
    "  return input.split('@')[1]\n"
```

```
]
```

```
},
```

```
{
```

```
  "cell_type": "code",
```

```
  "execution_count": 18,
```

```
  "metadata": {
```

```
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```

```
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```

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```

```
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```

```
      "height": 35
```

```
    }  
  },  
  "outputs": [  
    {  
      "output_type": "execute_result",  
      "data": {  
        "text/plain": [  
          "'domain.com'"  
        ],  
        "application/vnd.google.colaboratory.intrinsic+json": {  
          "type": "string"  
        }  
      },  
      "metadata": {},  
      "execution_count": 18  
    }  
  ],  
  "source": [  
    "domainGet('user@domain.com')\n"  
  ],  
},  
{  
  "cell_type": "markdown",  
  "metadata": {  
    "id": "gYydb-y085kM"  
  },  
  "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. *"

```
]
},
{
  "cell_type": "code",
  "execution_count": 19,
  "metadata": {
    "collapsed": true,
    "id": "Q4ldLGV785kM"
  },
  "outputs": [],
  "source": [
    "def findDog(input):\n",
    "    return 'dog' in input.lower().split()\n"
  ]
},
{
  "cell_type": "code",
  "execution_count": 20,
  "metadata": {
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    "outputId": "8bbd443e-1e50-478b-fcd6-2ffafd91a6f7",
    "colab": {
      "base_uri": "https://localhost:8080/"
    }
  },
}
```

```
"outputs": [  
  {  
    "output_type": "execute_result",  
    "data": {  
      "text/plain": [  
        "True"  
      ]  
    },  
    "metadata": {},  
    "execution_count": 20  
  }  
,  
  "source": [  
    "findDog('Is there a dog here?')\n"  
  ]  
,  
  {  
    "cell_type": "markdown",  
    "metadata": {  
      "id": "AyHQFALC85kO"  
    },  
    "source": [  
      "* Create a function that counts the number of times the word \"dog\"  
occurs in a string. Again ignore edge cases. *"  
    ]  
  },  
  {  
    "cell_type": "code",
```

```
"execution_count": 21,
"metadata": {
  "id": "6hdc169585kO"
},
"outputs": [],
"source": [
  "def countDog(inp):\n",
  "    dog = 0\n",
  "    for x in inp.lower().split():\n",
  "        if x == 'dog':\n",
  "            dog += 1\n",
  "    return dog\n",
  ]
},
{
  "cell_type": "code",
  "execution_count": 22,
  "metadata": {
    "id": "igzsvHb385kO",
    "outputId": "51db3854-8581-4fed-cd2d-2efb2d82917b",
    "colab": {
      "base_uri": "https://localhost:8080/"
    }
  },
  "outputs": [
    {
      "output_type": "execute_result",
```



```

    "data": {
      "text/plain": [
        "2"
      ]
    },
    "metadata": {},
    "execution_count": 22
  }
],
"source": [
  "countDog('This dog runs faster than the other dog dude!')\n"
],
},
{
  "cell_type": "markdown",
  "metadata": {
    "id": "3n7jJt4k85kP"
  },
  "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. **"

]
},
{
  "cell_type": "code",
  "execution_count": 23,
  "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",
  "execution_count": 24,
  "metadata": {
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    "outputId": "01ff5049-68bc-47fb-d468-77e34dc4d9cd",
    "colab": {
      "base_uri": "https://localhost:8080/",
      "height": 35
    }
  },
  "outputs": [
    {
      "output_type": "execute_result",
      "data": {
        "text/plain": [
          "'Small Ticket'"
        ],
        "application/vnd.google.colaboratory.intrinsic+json": {
          "type": "string"
        }
      },
      "metadata": { },
      "execution_count": 24
    }
  ],
}
```

```
"source": [
  "caught_speeding(81,True)\n"
],
{
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  "execution_count": 25,
  "metadata": {
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    "outputId": "f9476ac1-ae44-41e3-ec47-88e7cd146195",
    "colab": {
      "base_uri": "https://localhost:8080/",
      "height": 35
    }
  },
  "outputs": [
    {
      "output_type": "execute_result",
      "data": {
        "text/plain": [
          "'Big Ticket'"
        ],
        "application/vnd.google.colaboratory.intrinsic+json": {
          "type": "string"
        }
      },
      "metadata": { }
```

```

        "execution_count": 25
    }
],
"source": [
    "caught_speeding(81,False)\n"
]
},
{
    "cell_type": "markdown",
    "source": [
        "Create an employee list with basic salary values(at least 5 values for 5
employees) and using a for loop retrieve each employee salary and calculate
total salary expenditure. "
    ],
    "metadata": {
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    }
},
{
    "cell_type": "code",
    "source": [
        "list1=[{'Empname': 'Krishna', 'Basic_salary': '60000'}, {'Empname': 'Abi',
'Basic_salary': '50000'},\n",
        "{ 'Empname': 'Raju', 'Basic_salary': '40000'},{'Empname': 'Lakshmi',
'Basic_salary': '80000'}]\n",
        "key, value='Empname', 'Basic_salary'\n",
        "res=dict()\n",
        "list2=[]\n",
        "for i in list1:\n",

```

```

    " res[i[key]]=i[value]\n",
    "print(\"Basic salary :\"+str(res)) \n",
    "arr=[60000, 50000, 40000, 80000]\n",
    "sum=0\n",
    "val=0\n",
    "for v in range(0, len(arr)):\n",
    "    sum=arr[v]/6\n",
    "    val+=arr[v]\n",
    "print(\"Total salary:\",val) \n",
    "print(\"Total Expenditure:\", sum) "
],
"metadata": {
    "id": "R5-CdXSKjacN",
    "colab": {
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    },
    "outputId": "4447ca29-e801-49d0-d63b-0c9424478c97"
},
"execution_count": 39,
"outputs": [
    {
        "output_type": "stream",
        "name": "stdout",
        "text": [
            "Basic salary :{'Krishna': '60000', 'Abi': '50000', 'Raju': '40000',
'Lakshmi': '80000'}\n",
            "Total salary: 230000\n",
            "Total Expenditure: 13333.333333333334\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"
  }
},
{
  "cell_type": "code",
  "source": [
    "employee={'Empid':101,'EmpName':'Krishna','Basicpay':60000}\n",
    "department={'DeptName':'CSE','DeptId':100}\n",
    "result={*employee,*department}\n",
    "print(result)"
  ],
```

```
"metadata": {
  "id": "8ugVoEe0kOsk",
  "colab": {
    "base_uri": "https://localhost:8080/"
  },
  "outputId": "5353e69b-728f-4df1-9ede-62c84c3a856e"
},
"execution_count": 6,
"outputs": [
  {
    "output_type": "stream",
    "name": "stdout",
    "text": [
      "{ 'Empid': 101, 'EmpName': 'Krishna', 'Basicpay': 60000, 'DeptName': 'CSE', 'DeptId': 100}\n"
    ]
  }
],
"metadata": {
  "colab": {
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    "collapsed_sections": []
  },
  "kernel_spec": {
    "display_name": "Python 3",
    "language": "python",
```



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  },
  "language_info": {
    "codemirror_mode": {
      "name": "ipython",
      "version": 3
    },
    "file_extension": ".py",
    "mimetype": "text/x-python",
    "name": "python",
    "nbconvert_exporter": "python",
    "pygments_lexer": "ipython3",
    "version": "3.8.5"
  }
},
"nbformat": 4,
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}
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