**ASSIGNMENT 3**

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"cell\_type": "markdown",

"source": [

"Assignment Date\t : 2 October 2022\n",

"Student Name\t : SNEKHA A\n",

"Student Roll Number: 113219041112\n",

"Maximum Marks\t : 2 Marks\n",

"\n",

"\n"

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"metadata": {

"id": "Gt0k\_DFEjdFZ"

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"cell\_type": "markdown",

"metadata": {

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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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"cell\_type": "markdown",

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"source": [

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

]

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"colab": {

"base\_uri": "https://localhost:8080/"

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"outputs": [

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"output\_type": "execute\_result",

"data": {

"text/plain": [

"2401"

]

},

"metadata": {},

"execution\_count": 7

}

],

"source": [

"7\*\*4"

]

},

{

"cell\_type": "markdown",

"metadata": {

"id": "ds8G9S8j85j6"

},

"source": [

"\* Split this string:\*\n",

"\n",

" s = \"Hi there Sam!\"\n",

" \n",

"\*into a list. \*"

]

},

{

"cell\_type": "code",

"execution\_count": 8,

"metadata": {

"collapsed": true,

"id": "GD\_Tls3H85j7"

},

"outputs": [],

"source": [

"s=\"Hi there Sum!\"\n",

"x=s.split()"

]

},

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"id": "RRGOKoai85j8",

"outputId": "e5151c78-b748-4a41-d3ff-a3f0d286b9d3",

"colab": {

"base\_uri": "https://localhost:8080/"

}

},

"outputs": [

{

"output\_type": "stream",

"name": "stdout",

"text": [

"['Hi', 'there', 'Sum!']\n"

]

}

],

"source": [

"print(x)"

]

},

{

"cell\_type": "markdown",

"metadata": {

"id": "\_bBNOu-785j9"

},

"source": [

"\* 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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"cell\_type": "code",

"execution\_count": 10,

"metadata": {

"collapsed": true,

"id": "2TrzmDcS85j-"

},

"outputs": [],

"source": [

"planet=\"Earth\"\n",

"diameter=12742"

]

},

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"outputId": "ac9f9a44-1867-4a3f-d1ac-a0b69704c7ea",

"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",

"metadata": {

"id": "QAKtN7Hh85kB"

},

"source": [

"\* Given this nested list, use indexing to grab the word \"hello\" \*"

]

},

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"cell\_type": "code",

"execution\_count": 12,

"metadata": {

"collapsed": true,

"id": "-7dzQDyK85kD"

},

"outputs": [],

"source": [

"lst = [1,2,[3,4],[5,[100,200,['hello']],23,11],1,7]"

]

},

{

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"outputId": "1f768d09-5f2c-4742-90f2-63762b99e001",

"colab": {

"base\_uri": "https://localhost:8080/",

"height": 35

}

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"outputs": [

{

"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"

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"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": 14,

"metadata": {

"id": "vrYAxSYN85kG"

},

"outputs": [],

"source": [

"d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}"

]

},

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"colab": {

"base\_uri": "https://localhost:8080/",

"height": 35

}

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"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"

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"source": [

"\* What is the main difference between a tuple and a list? \*"

]

},

{

"cell\_type": "code",

"execution\_count": 16,

"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\*"

]

},

{

"cell\_type": "code",

"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": {

"id": "Gb9dspLC85kL",

"outputId": "54676fa4-d13c-4501-fe81-18ee4ac72a6f",

"colab": {

"base\_uri": "https://localhost:8080/",

"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": {

"id": "EqH6b7yv85kN",

"outputId": "8bbd443e-1e50-478b-fcd6-2ffafd91a6f7",

"colab": {

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"outputs": [

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"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": {

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"outputId": "51db3854-8581-4fed-cd2d-2efb2d82917b",

"colab": {

"base\_uri": "https://localhost:8080/"

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"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. \*\*"

]

},

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"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'"

]

},

{

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"outputId": "01ff5049-68bc-47fb-d468-77e34dc4d9cd",

"colab": {

"base\_uri": "https://localhost:8080/",

"height": 35

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"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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"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 retreive each employee salary and calculate total salary expenditure. "

],

"metadata": {

"id": "Tie4rC7\_kAOC"

}

},

{

"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",

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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": {

"provenance": [],

"collapsed\_sections": []

},

"kernelspec": {

"display\_name": "Python 3",

"language": "python",

"name": "python3"

},

"language\_info": {

"codemirror\_mode": {

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"version": 3

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"nbconvert\_exporter": "python",

"pygments\_lexer": "ipython3",

"version": "3.8.5"

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