

Assignment - 1

| | |
|-----------------|-------------------|
| Assignment Date | 09 September 2022 |
| Student Name | SUDHARSAN S |
| Student Roll no | 61771931047 |
| Maximum marks | 2 marks |

```
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  "nbformat_minor": 0,
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      "display_name": "Python 3"
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    "language_info": {
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        "## 1. Split this string"
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      "metadata": {
        "id": "CU48hgo4Owz5"
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    {
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      "metadata": {
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      "execution_count": null,
      "outputs": []
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  ]
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```

```

},
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    "s = \"Hi there Sam!\"\n",
    "x=s.split()\n",
    "x\n"
  ],
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      "data": {
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          "['Hi', 'there', 'Sam!']"
        ]
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      "metadata": {},
      "execution_count": 1
    }
  ]
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  "source": [
    "## 2. Use .format() to print the following string. \n",
    "\n",
    "### Output should be: The diameter of Earth is 12742 kilometers."
  ],
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    "id": "GH1QBn8HP375"
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  "cell_type": "code",
  "source": [
    "planet = \"Earth\"\n",
    "diameter = 12742"
  ],
  "metadata": {
    "id": "_ZHoml3kPqic"
  },
  "execution_count": null,
  "outputs": []
},
{
  "cell_type": "code",
  "source": [
    "planet = \"Earth\"\n",
    "diameter = 12742\n",

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        "s=\"The diameter of {} is {} kilometers.\\n\\n",
        "print(s.format(planet,diameter))"
    ],
    "metadata": {
        "id": "HyRyJv6CYPb4",
        "outputId": "3f6df589-e440-4bd0-9803-f5c17aba43fc",
        "colab": {
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        }
    },
    "execution_count": null,
    "outputs": [
        {
            "output_type": "stream",
            "name": "stdout",
            "text": [
                "The diameter of Earth is 12742 kilometers.\\n"
            ]
        }
    ]
},
{
    "cell_type": "markdown",
    "source": [
        "## 3. In this nest dictionary grab the word \"hello\""
    ],
    "metadata": {
        "id": "KE74ZEwkRExZ"
    }
},
{
    "cell_type": "code",
    "source": [
        "d =
{'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}
]]]}"
    ],
    "metadata": {
        "id": "fcVwbCc1QrQI"
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    "execution_count": null,
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    "cell_type": "code",
    "source": [
        "d =
{'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}
]]]}\n",
        "print(d['k1'][3]['tricky'][3]['target'][3])\n"
    ],
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    },
},

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"execution_count": null,
"outputs": [
  {
    "output_type": "stream",
    "name": "stdout",
    "text": [
      "hello\n"
    ]
  }
]
},
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    "# Numpy"
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  "metadata": {
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},
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  "cell_type": "code",
  "source": [
    "import numpy as np"
  ],
  "metadata": {
    "id": "LLiE_TYrhA1O"
  },
  "execution_count": null,
  "outputs": []
},
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    "## 4.1 Create an array of 10 zeros? \n",
    "## 4.2 Create an array of 10 fives?"
  ],
  "metadata": {
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{
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    "import numpy as np\n",
    "a=np.zeros(10)\n",
    "print(a)\n"
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    }
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  "outputs": [
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            "[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]\n"
        ]
    }
]
},
{
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    "source": [
        "import numpy as np\n",
        "b=np.ones(10)*5\n",
        "print(b) "
    ],
    "metadata": {
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        "outputId": "4ee3a1ef-34b0-4ee1-8ee0-4a8f703dddb3",
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        }
    },
    "execution_count": null,
    "outputs": [
        {
            "output_type": "stream",
            "name": "stdout",
            "text": [
                "[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]\n"
            ]
        }
    ]
},
{
    "cell_type": "markdown",
    "source": [
        "### 5. Create an array of all the even integers from 20 to 35"
    ],
    "metadata": {
        "id": "gZHHdUBvrMX4"
    }
},
{
    "cell_type": "code",
    "source": [
        "import numpy as np\n",
        "a=np.arange(20,35,2)\n",
        "print(a) "
    ],
    "metadata": {
        "id": "oAI2tbU2Yag-",
        "outputId": "d37c2172-7bae-4f43-9a64-9b26d7f06a30",
        "colab": {
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        }
    },
    "execution_count": null,
    "outputs": [

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        {
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            "name": "stdout",
            "text": [
                "[20 22 24 26 28 30 32 34]\n"
            ]
        }
    ],
},
{
    "cell_type": "markdown",
    "source": [
        "## 6. Create a 3x3 matrix with values ranging from 0 to 8"
    ],
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    }
},
{
    "cell_type": "code",
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        "import numpy as np\n",
        "a=np.arange(0,9).reshape(3,3)\n",
        "print(a)"
    ],
    "metadata": {
        "id": "tOlEVH7BYceE",
        "outputId": "bb251802-6c55-4718-f09b-cfadbb7cf5f2",
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    },
    "execution_count": null,
    "outputs": [
        {
            "output_type": "stream",
            "name": "stdout",
            "text": [
                "[[0 1 2]\n",
                " [3 4 5]\n",
                " [6 7 8]]\n"
            ]
        }
    ]
},
{
    "cell_type": "markdown",
    "source": [
        "## 7. Concatenate a and b \n",
        "## a = np.array([1, 2, 3]), b = np.array([4, 5, 6])"
    ],
    "metadata": {
        "id": "hQ0dnhAQuU_p"
    }
},
{
    "cell_type": "code",
    "source": [

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        "import numpy as np\n",
        "a=np.array([1,2,3])\n",
        "b=np.array([4,5,6])\n",
        "x=np.concatenate((a,b),axis=None)\n",
        "print(x)"
    ],
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        "outputId": "71d50026-5138-44db-c5ec-42d43721efbb",
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    },
    "execution_count": null,
    "outputs": [
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            "name": "stdout",
            "text": [
                "[1 2 3 4 5 6]\n"
            ]
        }
    ]
},
{
    "cell_type": "markdown",
    "source": [
        "# Pandas"
    ],
    "metadata": {
        "id": "dlPEY9DRwZga"
    }
},
{
    "cell_type": "markdown",
    "source": [
        "### 8. Create a dataframe with 3 rows and 2 columns"
    ],
    "metadata": {
        "id": "ijoYW51zwr87"
    }
},
{
    "cell_type": "code",
    "source": [
        "import pandas as pd\n"
    ],
    "metadata": {
        "id": "T5OxJRZ8uvR7"
    },
    "execution_count": null,
    "outputs": []
},
{
    "cell_type": "code",
    "source": [
        "import pandas as pd\n",

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"data={ 'Name': ['Binushya', 'Aruna', 'Deepa'], 'Age': ['08', '06', '09']} \n",
      "a=pd.DataFrame(data) \n",
      "print(a) "
    ],
    "metadata": {
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      "outputId": "681201eb-39c1-4353-912d-c64abf9b4879",
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      }
    },
    "execution_count": null,
    "outputs": [
      {
        "output_type": "stream",
        "name": "stdout",
        "text": [
          "      Name Age\n",
          "0  Binushya  08\n",
          "1    Aruna  06\n",
          "2    Deepa  09\n"
        ]
      }
    ]
  },
  {
    "cell_type": "markdown",
    "source": [
      "## 9. Generate the series of dates from 1st Jan, 2023 to 10th
Feb, 2023"
    ],
    "metadata": {
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    }
  },
  {
    "cell_type": "code",
    "source": [
      "import datetime\n",
      "import pandas as pd\n",
      "test =
datetime.datetime.strptime(\"01/01/2023\", \"%d/%m/%Y\") \n",
      "k=41\n",
      "dg = pd.date_range(test, periods=k) \n",
      "print(dg.strftime(\"%d/%m/%Y\")) "
    ],
    "metadata": {
      "id": "dgyC0JhVYl4F",
      "outputId": "6de61446-6fc5-4eb3-922d-b310ccef29ef",
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    "execution_count": null,
    "outputs": [
      {
        "output_type": "stream",

```



```

        "name": "stdout",
        "text": [
            "Index(['01/01/2023', '02/01/2023', '03/01/2023',
'04/01/2023', '05/01/2023',\n",
            "        '06/01/2023', '07/01/2023', '08/01/2023',
'09/01/2023', '10/01/2023',\n",
            "        '11/01/2023', '12/01/2023', '13/01/2023',
'14/01/2023', '15/01/2023',\n",
            "        '16/01/2023', '17/01/2023', '18/01/2023',
'19/01/2023', '20/01/2023',\n",
            "        '21/01/2023', '22/01/2023', '23/01/2023',
'24/01/2023', '25/01/2023',\n",
            "        '26/01/2023', '27/01/2023', '28/01/2023',
'29/01/2023', '30/01/2023',\n",
            "        '31/01/2023', '01/02/2023', '02/02/2023',
'03/02/2023', '04/02/2023',\n",
            "        '05/02/2023', '06/02/2023', '07/02/2023',
'08/02/2023', '09/02/2023',\n",
            "        '10/02/2023'],\n",
            "        dtype='object')\n"
        ]
    }
]
},
{
    "cell_type": "markdown",
    "source": [
        "## 10. Create 2D list to DataFrame\n",
        "\n",
        "lists = [[1, 'aaa', 22],\n",
        "          [2, 'bbb', 25],\n",
        "          [3, 'ccc', 24]]"
    ],
    "metadata": {
        "id": "ZizSetD-y5az"
    }
},
{
    "cell_type": "code",
    "source": [
        "lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]"
    ],
    "metadata": {
        "id": "_XMC8aEt011B"
    },
    "execution_count": null,
    "outputs": []
},
{
    "cell_type": "code",
    "source": [
        "import pandas as pd\n",
        "lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]\n",
        "a = pd.DataFrame(lists, columns=['No', 'Letter', 'Numbers'])\n",
        "print(a)"
    ],
    "metadata": {
        "id": "knH76sDKYsVX",

```

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    "outputId": "856d93fb-5563-4acb-af59-2a71d560790f",
    "colab": {
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  },
  "execution_count": null,
  "outputs": [
    {
      "output_type": "stream",
      "name": "stdout",
      "text": [
        "    No Letter  Numbers\n",
        "0      1      aaa      22\n",
        "1      2      bbb      25\n",
        "2      3      ccc      24\n"
      ]
    }
  ]
}
```