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      "string = \"Hi there Sam!\"\n",
      "print(string.split())"
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            "['Hi', 'there', 'Sam!']\n"
        }
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        "## 2. Use .format() to print the following string. \n",
        "### Output should be: The diameter of Earth is 12742 kilometers."
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      "source": [
        "planet = \TEarth\T",
        "diameter = 12742"
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      "execution_count": null,
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      "source": [
        "planet = \TEarth\T',
        "diameter = 12742\n",
        "print(\"The diameter of {} is {} kilometers.\".format(planet, diameter))\
n",
        "\n",
        "#or, you can do it like that:\n",
        "print(f\"The diameter of {planet} is {diameter} kilometers.\")"
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      "outputs": [
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```

```
"name": "stdout",
          "text": [
            "The diameter of Earth is 12742 kilometers.\n",
            "The diameter of Earth is 12742 kilometers.\n"
          ]
        }
      ]
   },
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        "## 3. In this nest dictionary grab the word \"hello\""
     ],
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'"· "kF74;
        "id": "KE74ZEwkRExZ"
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      "cell_type": "code",
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        "d = {'k1':[1,2,3,{'tricky':['oh', 'man', 'inception',{'target':}}]
[1,2,3,'hello']}]}\n",
        "import numpy as np\n",
        "array=np.arange(20,36,2)\n",
        "print(\"Array of all the even integers from 30 to 70\")\n",
        "print(array)"
      ],
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          "text": [
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            "[20 22 24 26 28 30 32 34]\n"
          ]
        }
      ]
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      "metadata": {
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      }
      "cell_type": "code",
      "source": [
        "import numpy as np\n",
```

```
"import numpy as np\n",
    "array=np.arange(20,36,2)\n",
    "print(\"Array of all the even integers from 30 to 70\")\n",
    "print(array)'
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      "text": [
        "Array of all the even integers from 30 to 70\n",
        "[20 22 24 26 28 30 32 34]\n"
   }
  ]
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  "metadata": {
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  }
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  "cell_type": "code",
  "source": [
    "import numpy as np\n",
    "array=np.zeros(10)\n",
    "print(\"An array of 10 zeros:\")\n",
    "print(array)"
 ],
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 },
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  "outputs": [
    {
      "output_type": "stream",
      "name": "stdout",
      "text": [
        "An array of 10 zeros:\n",
        "[0. 0. 0. 0. 0. 0. 0. 0. 0.]\n"
    }
```

```
]
},
  "cell_type": "code",
  "source": [
    "array=np.ones(10)*5\n",
    "print(\"An array of 10 fives:\")\n",
    "print(array)"
 ],
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  "outputs": [
    {
      "output_type": "stream",
      "name": "stdout",
      "text": [
        "An array of 10 fives:\n",
        "[5. 5. 5. 5. 5. 5. 5. 5. 5.]\n"
      ]
    }
  ]
},
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    "## 5. Create an array of all the even integers from 20 to 35"
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  "cell_type": "code",
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    "import numpy as np\n",
    "array=np.arange(20,36,2)\n",
    "print(\"Array of all the even integers from 30 to 70\")\n",
    "print(array)"
  "metadata": {
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  "execution_count": null,
  "outputs": [
      "output_type": "stream",
      "name": "stdout",
      "text": [
        "Array of all the even integers from 30 to 70\n",
```

```
"[20 22 24 26 28 30 32 34]\n"
      1
    }
  ]
},
  "cell_type": "markdown",
  "source": [
    "## 6. Create a 3x3 matrix with values ranging from 0 to 8"
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},
  "cell_type": "code",
  "source": [
    "import numpy as np\n",
    x = np.arange(0,9).reshape(3,3)\n'',
    "print(x)"
  ],
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"  "t0le"
    "id": "t0lEVH7BYceE",
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    {
      "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": {
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  }
},
  "cell_type": "code",
  "source": [
    "import numpy as np\n", 
"a = np.array([[1,2,],[3,4]])\n",
    "b = np.array([[5,6]])\n",
    "np.concatenate((a,b), axis=None)"
  ],
```

```
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      },
      "metadata": {},
      "execution_count": 13
    }
  ]
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    "## 8. Create a dataframe with 3 rows and 2 columns"
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  "source": [
   "import pandas as pd"
  "metadata": {
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  "outputs": []
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  "cell_type": "code",
  "source": [
    "import pandas as pd\n",
    "import pandas as pd\n",
    "\n",
    "data = \{ \n'',
    " \"calories\": [420, 380, 390],\n",
    " \"duration\": [50, 40, 45]\n",
```

```
"}\n",
   "\n",
   "#load data into a DataFrame object:\n",
   "df = pd.DataFrame(data)\n",
   "\n",
   "print(df)"
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                           50\n"
                420
       "1
                           40\n"
                380
       "2
                390
                           45\n"
     ]
   }
 ]
},
  "cell_type": "markdown",
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   "## 9. Generate the series of dates from 1st Jan, 2023 to 10th Feb, 2023"
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 }
},
  "cell_type": "code",
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   "import pandas as pd n,
   "\n",
   " \n",
   "\n",
   "\n",
   11
             end ='02-10-2023') \n",
   "\n",
   "\n",
   "\n",
   "for val in per1: \n",
   "\n",
" print(val)"
 "metadata": {
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   "colab": {
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        "2023-01-02 00:00:00\n"
        "2023-01-03 00:00:00\n"
        "2023-01-04 00:00:00\n"
        "2023-01-05 00:00:00\n"
        "2023-01-06 00:00:00\n"
        "2023-01-07 00:00:00\n"
        "2023-01-08 00:00:00\n"
        "2023-01-09 00:00:00\n"
        "2023-01-10 00:00:00\n"
        "2023-01-11 00:00:00\n"
        "2023-01-12 00:00:00\n"
        "2023-01-13 00:00:00\n"
        "2023-01-14 00:00:00\n"
        "2023-01-15 00:00:00\n"
        "2023-01-16 00:00:00\n"
        "2023-01-17 00:00:00\n"
        "2023-01-18 00:00:00\n"
        "2023-01-19 00:00:00\n"
        "2023-01-20 00:00:00\n"
        "2023-01-21 00:00:00\n"
        "2023-01-22 00:00:00\n"
        "2023-01-23 00:00:00\n"
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        "2023-01-31 00:00:00\n"
        "2023-02-01 00:00:00\n"
        "2023-02-02 00:00:00\n"
        "2023-02-03 00:00:00\n"
        "2023-02-04 00:00:00\n"
        "2023-02-05 00:00:00\n"
        "2023-02-06 00:00:00\n"
        "2023-02-07 00:00:00\n"
        "2023-02-08 00:00:00\n"
        "2023-02-09 00:00:00\n"
        "2023-02-10 00:00:00\n"
    }
 ]
},
  "cell_type": "markdown",
  "source": [
    "## 10. Create 2D list to DataFrame\n",
    "lists = [[1, 'aaa', 22], \n",
```

```
11
                    [2, 'bbb', 25],\n",
[3, 'ccc', 24]]"
         11
      ],
"metadata": {
    "" "7izSo
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         "lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]"
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         "import pandas as pd\n",
         "import numpy as np\n",
"lists = np.array([[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]])\n",
         "df=pd.DataFrame(lists)\n",
         "\n",
         "print(df)"
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                            2\n",
             "0 1
                           22\n",
                     aaa
             "1
                           25\n",
                 2
                     bbb
             "2
                  3
                           24\n"
                     ccc
     ]
    }
  ]
}
```