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"source": [

"# Basic Python"

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"metadata": {

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"## 1. Split this string"

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"metadata": {

"id": "CU48hgo4Owz5"

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"source": [

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

],

"metadata": {

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

"s=s.split()\n",

"print(s);"

],

"metadata": {

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

]

}

]

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"## 2. Use .format() to print the following string. \n",

"\n",

"### Output should be: The diameter of Earth is 12742 kilometers."

],

"metadata": {

"id": "GH1QBn8HP375"

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"cell\_type": "code",

"source": [

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

"diameter = 12742"

],

"metadata": {

"id": "\_ZHoml3kPqic"

},

"execution\_count": null,

"outputs": []

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"source": [

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

"diameter = 12742\n",

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

"diameter = 12742\n",

"print( 'The diameter of {} is {} kilometers.' .format(planet,diameter));"

],

"metadata": {

"id": "HyRyJv6CYPb4",

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"output\_type": "stream",

"name": "stdout",

"text": [

"The diameter of Earth is 12742 kilometers.\n"

]

}

]

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"cell\_type": "markdown",

"source": [

"## 3. In this nest dictionary grab the word \"hello\""

],

"metadata": {

"id": "KE74ZEwkRExZ"

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{

"cell\_type": "code",

"source": [

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

],

"metadata": {

"id": "fcVwbCc1QrQI"

},

"execution\_count": null,

"outputs": []

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{

"cell\_type": "code",

"source": [

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

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

"a=lst[3][1][2];\n",

"print(a)"

],

"metadata": {

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

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"outputId": "5a119a1f-aa66-4538-c6be-6d972f008faa"

},

"execution\_count": 3,

"outputs": [

{

"output\_type": "stream",

"name": "stdout",

"text": [

"['hello']\n"

]

}

]

},

{

"cell\_type": "markdown",

"source": [

"# Numpy"

],

"metadata": {

"id": "bw0vVp-9ddjv"

}

},

{

"cell\_type": "code",

"source": [

"import numpy as np"

],

"metadata": {

"id": "LLiE\_TYrhA1O"

},

"execution\_count": null,

"outputs": []

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{

"cell\_type": "markdown",

"source": [

"## 4.1 Create an array of 10 zeros? \n",

"## 4.2 Create an array of 10 fives?"

],

"metadata": {

"id": "wOg8hinbgx30"

}

},

{

"cell\_type": "code",

"source": [

"import numpy as np\n",

"array=np.zeros(10)\n",

"print(\"An array of 10 zeros:\")\n",

"print(array)\n",

"array=np.ones(10)\*5\n",

"print(\"An array of 10 fives:\")\n",

"print(array)"

],

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{

"output\_type": "stream",

"name": "stdout",

"text": [

"An array of 10 zeros:\n",

"[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]\n",

"An array of 10 fives:\n",

"[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]\n"

]

}

]

},

{

"cell\_type": "code",

"source": [],

"metadata": {

"id": "e4005lsTYXxx"

},

"execution\_count": null,

"outputs": []

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{

"cell\_type": "markdown",

"source": [

"## 5. Create an array of all the even integers from 20 to 35"

],

"metadata": {

"id": "gZHHDUBvrMX4"

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{

"cell\_type": "code",

"source": [

"import numpy as np\n",

"array=np.arange(20,36,2)\n",

"print(\"Array of all the even integers from 20 to 35\")\n",

"print(array)"

],

"metadata": {

"id": "oAI2tbU2Yag-",

"colab": {

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

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"outputId": "b8f00c5d-6658-46aa-96e2-6fd97ed8bf7b"

},

"execution\_count": 5,

"outputs": [

{

"output\_type": "stream",

"name": "stdout",

"text": [

"Array of all the even integers from 20 to 35\n",

"[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"

],

"metadata": {

"id": "NaOM308NsRpZ"

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{

"cell\_type": "code",

"source": [

"import numpy as np\n",

"x = np.arange(0, 9).reshape(3,3)\n",

"print(x)"

],

"metadata": {

"id": "tOlEVH7BYceE",

"colab": {

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

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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": {

"id": "hQ0dnhAQuU\_p"

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},

{

"cell\_type": "code",

"source": [

"import numpy as np\n",

" \n",

"a = np.array([1, 2, 3])\n",

"print(a)\n",

" \n",

"b = np.array([4, 5, 6])\n",

"print(b)\n",

" \n",

"print('\\n---Result of a and b---')\n",

"print(np.concatenate((a, b)))"

],

"metadata": {

"id": "rAPSw97aYfE0",

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"outputId": "38532143-9c53-4fa8-9d27-cb868d28bd26"

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"execution\_count": 7,

"outputs": [

{

"output\_type": "stream",

"name": "stdout",

"text": [

"[1 2 3]\n",

"[4 5 6]\n",

"\n",

"---Result of a and b---\n",

"[1 2 3 4 5 6]\n"

]

}

]

},

{

"cell\_type": "markdown",

"source": [

"# Pandas"

],

"metadata": {

"id": "dlPEY9DRwZga"

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"cell\_type": "markdown",

"source": [

"## 8. Create a dataframe with 3 rows and 2 columns"

],

"metadata": {

"id": "ijoYW51zwr87"

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},

{

"cell\_type": "code",

"source": [

"import pandas as pd\n"

],

"metadata": {

"id": "T5OxJRZ8uvR7"

},

"execution\_count": null,

"outputs": []

},

{

"cell\_type": "code",

"source": [

"import numpy as np\n",

"a=np.array([1,2,3])\n",

"b=np.array([4,5,6])\n",

"np.concatenate((a,b),axis=0)"

],

"metadata": {

"id": "xNpI\_XXoYhs0",

"colab": {

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

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"outputId": "9e5f2ed1-22db-415c-aee6-aa0ab602fc63"

},

"execution\_count": 8,

"outputs": [

{

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

"data": {

"text/plain": [

"array([1, 2, 3, 4, 5, 6])"

]

},

"metadata": {},

"execution\_count": 8

}

]

},

{

"cell\_type": "markdown",

"source": [

"## 9. Generate the series of dates from 1st Jan, 2023 to 10th Feb, 2023"

],

"metadata": {

"id": "UXSmdNclyJQD"

}

},

{

"cell\_type": "code",

"source": [

"import pandas as pd\n",

"pd.date\_range(start='01/01/2023',end='02/10/2023')"

],

"metadata": {

"id": "dgyC0JhVYl4F",

"colab": {

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"outputId": "04366456-b497-45e1-cb04-d8af06b661d5"

},

"execution\_count": 9,

"outputs": [

{

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

"data": {

"text/plain": [

"DatetimeIndex(['2023-01-01', '2023-01-02', '2023-01-03', '2023-01-04',\n",

" '2023-01-05', '2023-01-06', '2023-01-07', '2023-01-08',\n",

" '2023-01-09', '2023-01-10', '2023-01-11', '2023-01-12',\n",

" '2023-01-13', '2023-01-14', '2023-01-15', '2023-01-16',\n",

" '2023-01-17', '2023-01-18', '2023-01-19', '2023-01-20',\n",

" '2023-01-21', '2023-01-22', '2023-01-23', '2023-01-24',\n",

" '2023-01-25', '2023-01-26', '2023-01-27', '2023-01-28',\n",

" '2023-01-29', '2023-01-30', '2023-01-31', '2023-02-01',\n",

" '2023-02-02', '2023-02-03', '2023-02-04', '2023-02-05',\n",

" '2023-02-06', '2023-02-07', '2023-02-08', '2023-02-09',\n",

" '2023-02-10'],\n",

" dtype='datetime64[ns]', freq='D')"

]

},

"metadata": {},

"execution\_count": 9

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]

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"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": "\_XMC8aEt0llB"

},

"execution\_count": null,

"outputs": []

},

{

"cell\_type": "code",

"source": [

"import pandas as pd\n",

"lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]"

],

"metadata": {

"id": "knH76sDKYsVX"

},

"execution\_count": 10,

"outputs": []

}

]

}