PYTHON DAY - 5

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DIGITAL LEARNING SIMPLIFIED

DICTIONARY

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DICTIONARY

```
dict = {"name" : "john","age" : 30, "country" : "India"}
```

- Dictionary is a collection of key-value pairs enclosed in curly braces {}

- Dictionaries are also mutable, key-value pairs can be added, removed, or modified after they are created.

- Duplicates are not allowed

DICTIONARY

```
x = {
  "name" : "john",
  "age" : 30,
  "country" : "India"
}
print(x)
```

DUPLICATE VALUES ARE OVERWRITED

```
x = {
   "Name" : "John",
   "Age"  : 20,
   "Country" : "India",
   "Age" : 25
}
```

ALL DATA TYPES ARE VALID

```python
thisdict = {
  "brand": "Ford",
  "electric": False,
  "year": 1964,
  "colors": ["red", "white", "blue"]
}
```

ACCESSING ITEMS

ACCESSING ITEMS

```
thisdict = {
  "brand": "Ford",
  "model": "Mustang",
  "year": 1964
}
x = thisdict["model"]
```

```
x = thisdict.get("model")
```

ACCESSING ITEMS

.KEYS()

```
x = thisdict.keys()
```

.VALUES()

```
x = thisdict.values()
```

.ITEMS()

```
x = thisdict.items()
```

CHECK KEY

```
x = {
  "brand": "Ford",
  "model": "Mustang",
  "year": 1964
}
if "model" in x:
  print("Yes, 'model' is present in the given dictionary")
```

CHANGE ITEMS

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CHANGE VALUES

```
thisdict = {
  "brand": "Ford",
  "model": "Mustang",
  "year": 1964
}
thisdict["year"] = 2018
```

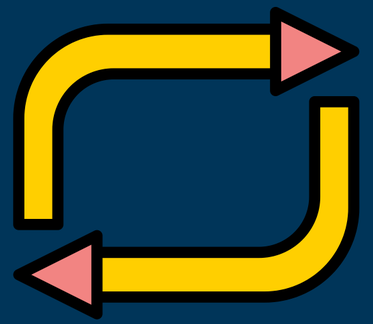
UPDATE METHOD

```
thisdict = {
  "brand": "Ford",
  "model": "Mustang",
  "year": 1964
}
thisdict.update({"year": 2020})
```

REMOVE ITEMS

Method
.pop(key)
.popitem()
.clear()
del dictionary

LOOPING THROUGH DICTIONARY



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LOOPING

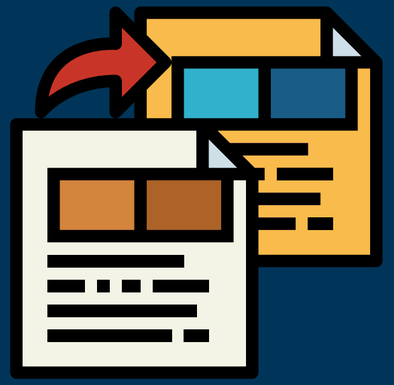
```
for x in thisdict.values():
  print(x)
```

```
for x in thisdict.keys():
  print(x)
```

```
for x in thisdict:
  print(thisdict[x])
```

```
for x, y in thisdict.items():
  print(x, y)
```

COPY DICTIONARY



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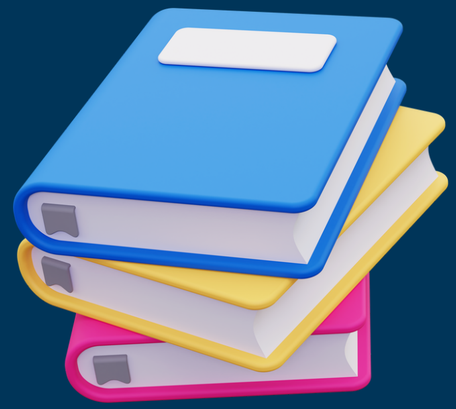
COPY DICTIONARY

```
thisdict = {
  "brand": "Ford",
  "model": "Mustang",
  "year": 1964
}
mydict = thisdict.copy()
print(mydict)
```

NESTED DICTIONARY



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NESTED DICTIONARY

```
myfamily = {
  "child1" : {
    "name" : "Emil",
    "year" : 2004
  },
  "child2" : {
    "name" : "Tobias",
    "year" : 2007
  },
  "child3" : {
    "name" : "Linus",
    "year" : 2011
  }
}
```

ASSIGNMENT

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ROMAN NUMERALS TO INTEGER

Roman numerals to integer

Roman numerals from user input should be converted into integer values as output

Rules:

1. If the Larger value is written first followed by smaller value, then add those values.

   eg: III = 3, XII = 12

2. If smaller is written first followed by larger value, then subtract those values

   eg: IV = 4 , CD = 400

I	1
V	5
X	10
L	50
C	100
D	500
M	1000

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EXAMPLE

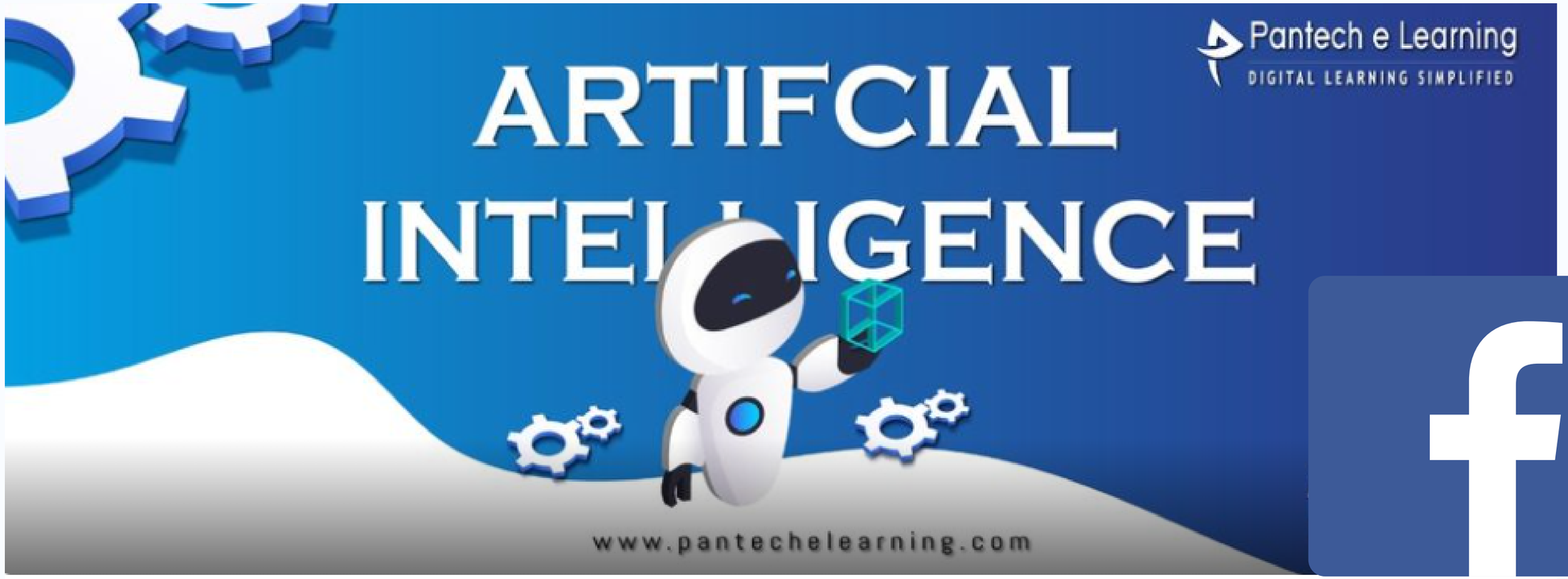
Number	Expansion	Roman Numeral	1-10 Roman numerals
1	1	I	1 = I
2	1 + 1	II	2 = II
3	1 + 1 + 1	III	3 = III
4	5 – 1	IV	4 = IV
5	5	V	5 = V
6	5 + 1	VI	6 = VI
7	5 + 1 + 1	VII	7 = VII
8	5 + 1 + 1 + 1	VIII	8 = VIII
9	10 – 1	IX	9 = IX
10	10	X	10 = X

TEST CASES

Test cases

1. input = "MCMXCIX" ---> output = 1999
2. input = "DCCC" ---> output = 800
3. input = "DCLXXIII" ---> output = 673
4. input = "MMMDCCXXIV" ---> output = 3724
5. input = "MMMCMXCIX" ---> output = 3999

SUBMISSION PROCEDURE



PANTECH - AI , Machine Learning & Deep Learning Group

SUBMISSION PROCEDURE

#NMassignment1

#naanmudhalvan

#TNSDC

#python

#pantechelearning

@Pantechelearning @Sankar Pantech

Name :

College:

NM code:

Assignment code:

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THANKS FOR WATCHING

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