1.10th _ task1 _ Basic python

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1 FSDS, GENAI, AGENTIAI

1.1 basic python

[1]:
```
# Variables in Python

first_name = 'chandra'
last_name = 'sekhar'
country = 'HYD'
city = 'TELENGANA'
age = 24
is_married = True
skills = ['HTML', 'CSS', 'JS', 'React', 'Python']
person_info = {
    'firstname':'Asabeneh',
    'lastname':'Yetayeh',
    'country':'Finland',
    'city':'Helsinki'
    }
```

[11]:
```
# Printing the values stored in the variables

print('First name:', first_name)
print('First name length:', len(first_name))
print('Last name: ', last_name)
print('Last name length: ', len(last_name))
print('Country: ', country)
print('City: ', city)
print('Age: ', age)
print('Married: ', is_married)
print('Skills: ', skills)
print('Person information: ', person_info)
```

```
First name: chandra
First name length: 7
Last name:  sekhar
Last name length:  6
Country:  HYD
```

```
City:  TELENGANA
Age:  24
Married:  True
Skills:  ['HTML', 'CSS', 'JS', 'React', 'Python']
Person information:  {'firstname': 'Asabeneh', 'lastname': 'Yetayeh', 'country':
'Finland', 'city': 'Helsinki'}
```

[14]:
```
# Declaring multiple variables in one line

first_name, last_name, country, age, is_married = 'Chandra', 'sekhar', 'India',␣
 ↪250, True

print(first_name, last_name, country, age, is_married)
print('First name:', first_name)
print('Last name: ', last_name)
print('Country: ', country)
print('Age: ', age)
print('Married: ', is_married)
```

```
Chandra sekhar India 250 True
First name: Chandra
Last name:  sekhar
Country:  India
Age:  250
Married:  True
```

[15]:
```
print(3 + 2)    # addition(+)
print(3 - 2)    # subtraction(-)
print(3 * 2)    # multiplication(*)
print(3 / 2)    # division(/)
print(3 ** 2)   # exponential(**)
print(3 % 2)    # modulus(%)
print(3 // 2)   # Floor division operator(//)
```

```
5
1
6
1.5
9
1
1
```

[16]:
```
# Checking data types
print(type(10))                    # Int
print(type(3.14))                  # Float
print(type(1 + 3j))                # Complex
print(type('prakashsenapati'))     # String
print(type([1, 2, 3]))             # List
```

```
print(type({'name':'senapati'})) # Dictionary
print(type({9.8, 3.14, 2.7}))    # Set
print(type((9.8, 3.14, 2.7)))    # Tuple
print(type(3 == 3))              # Bool
print(type(3 >= 3))              # Bool
```

```
<class 'int'>
<class 'float'>
<class 'complex'>
<class 'str'>
<class 'list'>
<class 'dict'>
<class 'set'>
<class 'tuple'>
<class 'bool'>
<class 'bool'>
```

[2]:
```
9
```

[2]: 9

[3]:
```
9 + 9
```

[3]: 18

[4]:
```
9 + 9 - (10 - 3) + 3
```

[4]: 14

[5]:
```
9 + 9 - 10 - 3 + 3
```

[5]: 8

2 numbers are called as operand

3 +, - * are called operator

4 ARITHMETIC OPERATOR

- 1- ARITHMETIC OPERATOR (+ , -, *, /, %, %%, **)
- 2- ASSIGNMEN OPERATOR (=)
- 3- RELATIONAL OPERATOR
- 4- LOGICAL OPERATOR
- 5- UNARY OPERATOR

[6]:
```
10 + 5 #addition
```

[6]: 15

[7]:
```
10- 5 #sutraction
```

[7]: 5

[8]:
```
10 * 2 # MULTIPLICATION
```

[8]: 20

[9]:
```
10 ** 2  #POWER
```

[9]: 100

[10]:
```
10 *** 2
```

```
  Input In [10]
    10 *** 2
         ^
SyntaxError: invalid syntax
```

[ ]:
```
10 / 5 # FLOAT DIVISION
```

[ ]: 2.0

[ ]:
```
10 // 5 # int division
```

[ ]: 2

[ ]:
```
10 % 5
```

[ ]: 0

[ ]:
```
15 % 6
```

[ ]: 3

[ ]:
```
15 %% 6
```

```
  Input In [116]
    15 %% 6
       ^
SyntaxError: invalid syntax
```

[ ]:
```
15 / 6
```

[ ]: 2.5

[ ]:
```
15 // 6
```

[ ]: 2

5 Assignment operator

[ ]:
```
x = 10
x
# x is called variable or object or identifier
```

[ ]: 10

[ ]:
```
x + 2
```

[ ]: 12

[ ]:
```
x + 2
```

[ ]: 12

[ ]:
```
x + 2
```

[ ]: 12

[ ]:
```
x + 2
```

[ ]: 12

[ ]:
```
x += 2
x
```

[ ]: 12

[ ]:
```
x += 2
x
```

[ ]: 14

[ ]:
```
x += 2
x
```

[ ]: 16

[ ]:
```
x += 2
x
```

[ ]: 18

[ ]:
```
x
```

[ ]: 18

[ ]:
```
x -= 2
x
```

[ ]: 16

[ ]:
```
x -= 2
x
```

[ ]: 14

[ ]:
```
x -= 2
x
```

[ ]: 12

[ ]:
```
x
```

[ ]: 12

[ ]:
```
x *= 2
x
```

[ ]: 24

[ ]:
```
x *= 2
x
```

[ ]: 48

[ ]:
```
x /= 2
```

[ ]:
```
x
```

[ ]: 24.0

[ ]:
```
x /= 2
x
```

[ ]: 6.0

6 unary operator

[ ]:
```
n = 7
n
```

[ ]:
```
7
```

[ ]:
```
m = -n
m
```

[ ]:
```
-7
```

[ ]:
```

```