PYTHON FUNDAMENTALS

Exercise 1

```
# Write Python code that prints your name, student number and email address.

print("Bob")
print("ST1001")
print("bob@gmail.com")
```

Output

```
Bob
ST1001
bob@gmail.com

Process finished with exit code 0
```

Exercise 2

```
# Write Python code that prints your name, student number and email address using escape sequences.
print("Bob\nST1001\nbob@gmail.com")
```

Output

```
Bob
ST1001
bob@gmail.com

Process finished with exit code 0
```

Exercise 3

```
# Write Python code that add, subtract, multiply and divide the two numbers. You can use the two numbers 14 and 7.

num1 = 14
num2 = 7
# ADDITION
print(f"{num1} + {num2} = {num1 + num2}")
# SUBSTRACTION
print(f"{num1} - {num2} = {num1 - num2}")
```

```python
# MULTIPLICATION
print(f"{num1} * {num2} = {num1 * num2}")
# DIVISION
print(f"{num1} / {num2} = {num1 / num2}")
```

Output

```
14 + 7 = 21
14 - 7 = 7
14 * 7 = 98
14 / 7 = 2.0

Process finished with exit code 0
```

Exercise 4

```python
# Write Python code that displays the numbers from 1 to 5 as steps.
print("""1\n2\n3\n4\n5""")
# or
for i in range(1, 6):
    print(i)
```

Output

```
1
2
3
4
5

Process finished with exit code 0
```

Exercise 5

```python
# Write Python code that outputs the following sentence (including the quotation marks
and line break) to the screen:
'''
"SDK" stands for "Software Development Kit", whereas
"IDE" stands for "Integrated Development Environment".
'''

print('"SDK" stands for "Software Development Kit", whereas\n"IDE" stands for "Integrated
Development Environment".')
```

Output

```
"SDK" stands for "Software Development Kit", whereas
"IDE" stands for "Integrated Development Environment".

Process finished with exit code 0
```

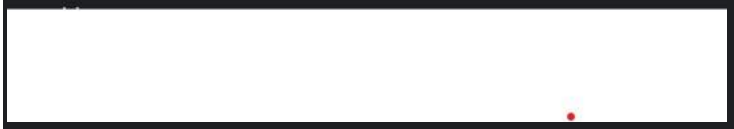
Exercise 6

```
# Practice and check the output

print("python is an \"awesome\" language.")
```

Output

```
python is an "awesome" language.
```



```
print("python\n\t2023")
```

Output

```
python
    2023
```

```
print('I\'m from Entri.\b')
```

Output

```
I'm from Entri
```

```
print("\65")
```

Output

```
5
```

```
print("\x65")
```

Output

```
e
```

```
print("Entri", "2023", sep="\n")
```

Output

```
Entri
2023
```

```
print("Entri", "2023", sep="\b")
```

Output

```
Entr2023
```

```
print("Entri", "2023", sep="*", end="\b\b\b\b")
```

Output

```
Entri*
```

Exercise 7

```
# Define the variables below. Print the types of each variable. What is the sum of your
variables? (Hint: use a type conversion function.) What datatype is the sum?
# num=23
# textnum="57"
# decimal=98.3

num = 23
textnum = "57"
decimal = 98.3

print("Type of num:", type(num))
print("Type of textnum:", type(textnum))
print("Type of decimal:", type(decimal))

sum_of_variables = num + int(textnum) + decimal
print("Sum of variables:", sum_of_variables)
print("Type of sum:", type(sum_of_variables))
```

Output

```
Type of num: <class 'int'>
Type of textnum: <class 'str'>
Type of decimal: <class 'float'>
Sum of variables: 178.3
Type of sum: <class 'float'>

Process finished with exit code 0
```

Exercise 8

```
# calculate the number of minutes in a year using variables for each unit of time.
# print a statement that describes what your code does also.
# Create three variables to store no of days in a year, minute in a hour, hours in a day,
# then calculate the total minutes in a year and print the values
# (hint) total number of minutes in an year =No.of days in an year * Hours in a day *
```

```
Minutes in an hour

days_in_year = 365
hours_in_day = 24
minutes_in_hour = 60

total_minutes = days_in_year * hours_in_day * minutes_in_hour

print("days_in_year = 365\nhours_in_day = 24\nminutes_in_hour = 60\nTotal number of
minutes in an year = No.of days in an year * Hours in a day * Minutes in an hour")

print(f"Total minutes in a year = {days_in_year} * {hours_in_day} * {minutes_in_hour} =
{total_minutes}")
```

Output

```
days_in_year = 365
hours_in_day = 24
minutes_in_hour = 60
Total number of minutes in an year = No.of days in an year * Hours in a day * Minutes in an hour
Total minutes in a year = 365 * 24 * 60 = 525600

Process finished with exit code 0
```

Exercise 9

```
# Write Python code that asks the user to enter his/her name and then output/prints
his/her name with a greeting.
# An example runs of the program:
# Please enter you name: Tony
# Hi Tony, welcome to Python programming :)



name = input("Enter your name: ")
print("Hi " + name + ", welcome to Python programming")
```

Output

```
Enter your name: Tony
Hi Tony, welcome to Python programming
```

Exercise 10

```
# Name your file: PoundsToDollars.py
# Write a program that asks the user to enter an amount in pounds (£) and the program
calculates and converts an amount in dollar ($)
# An example runs of the program:
# Please enter amount in pounds: XXX£XXX are $XXX
```

```python
print("Pounds To Dollars Conversion")
pounds = float(input("Please enter amount in pounds: "))
dollars = pounds * 1.25

print("£" + str(pounds) + " are $" + str(dollars))
```

Output

```
Pounds To Dollars Conversion
Please enter amount in pounds: 234
£234.0 are $292.5
```