Practice Questions

To become Interview Ready

Lecture 1 to 5

- Fundamentals of Data Science & Python
- Variables & Data Types
- Operators in Python
- Built in Functions

Question 1

In [ ]:
```
You are developing a program for a math competition where participants
need to solve mathematical expressions and provide the result.
You want to use Python to automate the evaluation process.
Here's how you could approach it:

1)Take input from the participant to enter a mathematical expression
2)evaluate the expression entered by the participant and obtain the result.
3)Display the result to the participant.
```

In [3]:
```
expression = input("Enter the mathematical expression")
result = eval(expression)
print("the result of the expression is", result)
print("thankyou for participating in the maths competition")
```

```
Enter the mathematical expression89**25-265+369/5
the result of the expression is 5.429379091346464e+48
thankyou for participating in the maths competition
```

In [ ]:

In [ ]:

In [ ]:

Question 2

In [ ]:
```
Suppose you're analyzing a dataset containing information
about house prices in a city. Each record includes details
such as the house size (in square feet), number of bedrooms,
and price. You want to perform various calculations and
manipulations on this dataset using Python.
Answer the following questions:

1) Ask the user 1 & 2  to enter house size,
number of rooms they want and  .Check the data type user has entered

2)Calculate the price of house , if per sq feet is Rs 5000.

3) Threshold price is 75 lakh Rs, which user
is paying the price above threshold price.
```

In [6]:
```
house_size_1 = float(input("user 1 enter the size of the house"))
bedrooms_1 = int(input("user 1 enter the number of berdroms"))
price_1 = float(input("user 1 enter the budget"))

house_size_2 = float(input("user 2 enter the size of the house"))
bedrooms_2 = int(input("user 2 enter the number of berdroms"))
price_2 = float(input("user 2 enter the budget"))

house_price_1 = house_size_1 * 5000
print("the price of the house for user 1 is", house_price_1)

house_price_2 = house_size_2 * 5000
print("the price of the house for user 2 is", house_price_2)

threshold_price = 7500000
user1_threshold = house_price_1 >= threshold_price
user2_threshold = house_price_2 >= threshold_price

print(f"user 1 is paying above threshold",user1_threshold)
print(f"user  2 is paying above threshold",user2_threshold)
```

```
user 1 enter the size of the house3000
user 1 enter the number of berdroms5
user 1 enter the budget6500000
user 2 enter the size of the house1000
user 2 enter the number of berdroms2
user 2 enter the budget3500000
the price of tyhe house for user 1 is 15000000.0
the price of tyhe house for user 2 is 5000000.0
user 1 is paying above threshold True
user  2 is paying above threshold False
```

Question 3

In [ ]:
```
You are working on a project to analyze stock market data.
Create variables to store the stock symbol, current price,
and percentage change in price. Then, calculate the new price
after a 10% increase using arithmetic operators. Finally,
prompt the user to enter their budget using the input() function,
convert it to a float using the float() function, and
compare it with the new price
```

In [11]:
```
stock_symbol = "xyz"
current_price = 100
percent_change = 10

new_price = current_price*(1+percent_change/100)

print("the new price of the stock is", new_price)
user_budget= int(input("enter your budget"))

a = user_budget >= new_price
print("user budget is greater than new price", a)
```

```
the new price of the stock is 110.00000000000001
enter your budget75
user budget is greater than new price False
```

Home work

Question 4

In [ ]:
```
You are working on a project to analyze weather data.
Create variables to store the current temperature,
the minimum temperature recorded, and the maximum temperature recorded.
Determine whether the current temperature is within
the range of the minimum and maximum temperatures
recorded using logical operators
```

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

Assignment

In [ ]:
```
You are tasked with analyzing customer feedback data
for a company. Create variables to store the customer's rating (out of 5),
the minimum acceptable rating, and the maximum acceptable rating.
Determine whether the customer's rating
is within the acceptable range using logical operators.
```

In [ ]:
```

```