Name: ABC
mail id: ABC@XYZ.com
College: PQRST UNIVERSITY, PLACE

MINI Project 1:

Write code and your output in this format

Q0: Write a code to find the data type of each variable

```
A  = -75
B = 55.12
C =  15.2 * 1e-2
D = 'Ram'
E = ('Ghana','Kenya','Sudan')
F = [1,2,45.5,6]
G = {'India':'NewDelhi','Pakistan' : 'Islamabad','Nepal': 'Kathmandu'}
H = None
```

Code:

```
print(type(A))
print(type(B))
print(type(C))
print(type(D))
print(type(E))
print(type(F))
print(type(G))
print(type(H))
```

Output:

```
<class 'int'>
<class 'float'>
<class 'float'>
<class 'str'>
<class 'tuple'>
<class 'list'>
<class 'dict'>
<class 'NoneType'>
```

Q1 : Write code to

1.1 Construct a list of name 'COLORS' having items red,green,blue,yellow,white,black

1.2 Print List

1.3 Print First 3 item COLORS of list as list

1.4 Print last 3 item of list COLORS as list using minus indexing

1.5 append 'Cyan' to list COLORS and print list

1.6 Delete item idex 2,3,4 from COLORS and print list and length of list COLORS

1.7 check 'Orange in the list of not.

CODE:

OUTPUT

Q2: Write a code to find given year is a leap year or not using if else condition

Note:

✅ **The year must be evenly divisible by 4;**

❌ If the year can also be evenly divided by 100, **it is *not* a leap year;**

unless...

✅ The year is also evenly divisible by 400. **Then it *is* a leap year.**

```python
# Python program to check if year is a leap year or not

year = int(input('Type Year'))
# type code here
```

CODE:

OUTPUT

Q3: Construct a dictionary having keys and value as following

- name: VIJAY
- income : 45K i.e. 45000 (Integer)
- child : Hema, Neha, Ranbeer (List)

Print all keys
Print all children name and no. of childer
Update income by multiplying with factor 1.5
Add a child name ' Ravi'

CODE:

OUTPUT

Q4: Given a list, iterate it, and display numbers divisible by five, and if you find a number greater than 150, stop the loop iteration.

```
list1 = [12, 15, 32, 42, 55, 75, 122, 132, 150, 180, 200]
```

CODE:

OUTPUT

Q5: Write a function in Python to count and display the total number of words in a text file.

Using split function and make your own txt file

CODE:

OUTPUT

Q6: Write a function

display_words() in python to read lines from a text file "story.txt", and display those words, which are less than 4 characters.

CODE:

OUTPUT

Q7: use keywords Try, Except, Else, Finally

- **Try**: This block will test the excepted error to occur
- **Except**: Here you can handle the error
- **Else**: If there is no exception then this block will be executed
- **Finally**: Finally block always gets executed either exception is generated or not

https://www.geeksforgeeks.org/try-except-else-and-finally-in-python/
To make a program use these keywords

CODE:

OUTPUT

Q8: use math library

https://www.w3schools.com/python/module_math.asp
Type code which uses at least 10 math library build function. Try to use constant also.

CODE:

OUTPUT

Q9: use io library

https://www.geeksforgeeks.org/stringio-module-in-python/

Use four functions of the io library in your code comment its explanation also

CODE:

OUTPUT

Q10: use NumPy library

Use 10 functions of the NumPy library in your code comment its explanation also

CODE:

OUTPUT

Q11: use Errors and Exceptions

Explain any 5 Errors and Exceptions in Python and use them in code
https://www.geeksforgeeks.org/errors-and-exceptions-in-python/

CODE:

OUTPUT

CODE:

OUTPUT

CODE:

OUTPUT

CODE:

OUTPUT

Q12 : Write a Python class named Circle constructed by a radius and two methods that will compute the area and the perimeter of a circle.

```python
class Circle():
    def __init__(self, r):
        #write code here
        pass


    def area(self):
        #write code here
        pass

    def perimeter(self):
        #write code here
        pass

NewCircle = Circle(8)
print(NewCircle.area())
print(NewCircle.perimeter())
```

CODE:

OUTPUT