Q1. Write a program to accept percentage from the user and display the grace accoriding to the following.

| MARKS | GRADES |
| --- | --- |
| >90 | A |
| >80 and <= 90 | B |
| >=60 and <=80 | C |
| below 60 | D |

Ans:

#ANSWER OF QUE: 1

marks = int(input("Enter the marks: "))

if marks > 90:

print("You got A grade")

elif marks > 80 and marks <= 90:

print("You got B grade")

elif marks >= 60 and marks <= 80:

print("You got C grade")

else:

if marks < 60 :

print("You got D grade")

OUTPUT:

Enter the marks: 55

You got D grade

Q2. Write a program to accept the cost price of a bike and display the road tax to be paid according to the following criteria:

| TAX | COST PRICE (IN RS) |
| --- | --- |
| 15% | >100000 |
| 10% | >= 50000 and <= 100000 |
| 5% | <= 50000 |

Ans:

#Answer of que 2:

price = int(input("Enter Bike Price: "))

if price > 100000:

print("You have to 15% Tax")

elif price > 50000 and price <= 100000:

print("You have to 10% Tax")

else:

if price <= 50000:

print("You have to pay 5% Tax")

OUTPUT:

Enter Bike Price: 89000

You have to pay 10% tax

Q3. Accept any city from the user and display mountments of that city.

| CITY | MOUNTMENTS |
| --- | --- |
| Delhi | Red fort |
| Agra | Taj Mahal |
| Jaipur | Jal Mahal |

#Answer of que 3:

city = input("Enter City name: ")

if city == "Delhi" or "delhi":

print("In Delhi Mountmain is Red Fort")

elif city == "Agra" or "agra":

print("In Agra Mountmain is Taj mahal")

elif city == "Jaipur" or "jaipur":

print("In Jaipur mountmain is Jal Mahal")

else:

print("Enter again")

OUTPUT:

Enter City Name: Delhi

In Delhi Mountmain is Red Fort

Q4. check how many times a given number can be divide by 3 before it is

less than or equal to 10.

Ans:

i = 1

while i<=10:

if i%3 == 0:

print(i)

i = i +1

OUTPUT:

3

6

9

Q5.Why and when to use While loop in python give a detailed description with example.

Ans:

Python while loop is used to run a block code until

a certain condition is met.while loop evaluates

the condition. If the condition evaluates to True , the

code inside the while loop is executed.

Q6 Use nested while loop to print 3 different pattern.

Ans:

#pattern 1:

rows = 5

i = 1

while i <= rows:

j = 1

while j <= i:

print((i \* 2 - 1), end=" ")

j = j + 1

i = i + 1

print(' ')

OUTPUT:

1

3 3

5 5 5

7 7 7 7

9 9 9 9 9

#pattern 2:

rows = 5

i = rows

while i >= 1:

j = rows

while j > i:

# display space

print(' ', end=' ')

j -= 1

k = 1

while k <= i:

print('\*', end=' ')

k += 1

print()

i -= 1

OUTPUT:

\* \* \* \* \*

\* \* \* \*

\* \* \*

\* \*

\*

#pattern 3:

rows = 5

i = 1

while i <= rows:

j = i

while j < rows:

# display space

print(' ', end=' ')

j += 1

k = 1

while k <= i:

print('\*', end=' ')

k += 1

print()

i += 1

i = rows

while i >= 1:

j = i

while j <= rows:

print(' ', end=' ')

j += 1

k = 1

while k < i:

print('\*', end=' ')

k += 1

print('')

i -= 1

OUTPUT:

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Q7. Reverse a while loop to display numbers from 10 to 1.

Ans:

#Ans of Q7

i = 10

while i>=1:

print(i)

i = i - 1

OUTPUT:

10

9

8

7

6

5

4

3

2

1

Q8. Reverse a while loop to display numbers from 10 to 1.

Ans:

#Ans of Q8

i = 10

while i>=1:

print(i)

i = i - 1

OUTPUT:

10

9

8

7

6

5

4

3

2

1