**PYTHON**

**Assignment Questions**

SKILLS

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**Assignment Questions**

Assignment **2:**

**SKILLS**

Marks: 20

1. Write a program to accept percentage from the user and display the grade according to the following

criteria:

Marks

Grade

>**90**

A

>80 and <=90

B

>=60 and <=**80**

C

below **60**

D

Answer:

ercentage = float(input("Enter percentage: "))

if percentage > 90:

grade = "A"

elif percentage > 80 and percentage <= 90:

grade = "B"

elif percentage >= 60 and percentage <= 80:

grade = "C"

else:

grade = "D"

print("Grade:", grade)

2. **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

15%

10%

5%

Cost Price(in Rs)

>100000

50000 and <= 100000

**<=** 50000

Answer:

costprice=int(input("enter the cost price of a bike"))

if costprice>100000:

print("tax 15%")

elif costprice>50000 and costprice<=100000:

print("tax 10%")

elif costprice<=50000:

print("tax 5%")

3. Accept any city from the user **and** display monuments of **that** city.

City

Delhi

Monument

Red Fort

Taj Mahal

Agra

Jaipur

Jal Mahal

Answer:

city=(input("enter the city name"))

if city == "delhi":

print("monument-red fort")

elif city == "Agra":

print("monument-Taj Mahal")

elif city == "Jaipur":

print("monument-Jai Mahal")

4. Check how many times a given number can be divided **by** 3 before it is less than or equal to 10.

Answer:

num = int(input("Enter a number: "))

count = 0

while num > 10:

num /= 3

count += 1

print("The number can be divided by 3", count, "times before it is less than or equal to 10.")

5. Why and When to Use while Loop **in Python give** a detailed description with example

Answer:In Python, the while loop is used to repeatedly execute a block of code as long as a certain condition is true. The loop continues to execute as long as the condition remains true, and stops when the condition becomes false. The while loop is useful when you want to execute a block of code repeatedly until a certain condition is met.

Eg:

valid\_input = False

while not valid\_input:

user\_input = input("Enter a number between 1 and 10: ")

if user\_input.isdigit() and 1 <= int(user\_input) <= 10:

valid\_input = True

else:

print("Invalid input. Please try again.")

6. Use nested while loop to **print 3** different pattern.

Answer:

1- Triangle pattern

i = 1

while i <= 5:

j = 1

while j <= i:

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

j += 1

print()

i += 1

2- square pattern

i = 1

while i <= 5:

j = 1

while j <= 5:

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

j += 1

print()

i += 1

3- Diamond pattern

i = 1

while i <= 5:

j = 1

while j <= 5 - i:

print(" ", end="")

j += 1

k = 1

while k <= 2 \* i - 1:

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

k += 1

print()

i += 1

i = 4

while i >= 1:

j = 1

while j <= 5 - i:

print(" ", end="")

j += 1

k = 1

while k <= 2 \* i - 1:

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

k += 1

print()

i -= 1

**7.** Reverse a while loop to **display** numbers from 10 to 1.

Answer:

i = 10

while i >= 1:

print(i)

i -= 1

Note:- Please create a Google Document and write your answers and upload the shareable link of the Google Document **with** view access during the submission of the assignment.

Data Science Masters