1. def get\_grade(percentage):

if percentage > 90:

return "A"

elif percentage >= 80:

return "B"

elif percentage >= 60:

return "C"

else:

return "D"

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

grade = get\_grade(percentage)

print("Grade:", grade)

1. def calculate\_road\_tax(cost\_price):

if cost\_price > 100000:

return cost\_price \* 0.15

elif cost\_price > 50000:

return cost\_price \* 0.10

else:

return cost\_price \* 0.05

cost\_price = float(input("Enter cost price of the bike: "))

road\_tax = calculate\_road\_tax(cost\_price)

print("Road tax to be paid:", road\_tax)

1. monuments = {

"Delhi": "Taj Mahal",

"Agra": "Taj Mahal",

"Mumbai": "Gateway of India",

"Jaipur": "Hawa Mahal",

"Udaipur": "City Palace"

}

city = input("Enter a city: ")

monument = monuments.get(city)

if monument:

print("The monument of", city, "is", monument)

else:

print("Monument not found for", city)

1. def count\_divisions(number):

count = 0

while number > 10:

number = number / 3

count += 1

return count

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

count = count\_divisions(number)

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

1. An if statement checks if an expression is true or false, and then runs the code inside the statement only if it is true. The code inside the loop is only run once... A while statement is a loop. Basically, it continues to execute the code in the while statement for however long the expression is true.

1. The syntax of a nested for loop: is as follows:

for ( start; condition; increment or decrement )

{

for ( start; condition; increment or decrement )

{

Block of statement(s);

}

Block of statement(s);

}

The syntax of a nested while loop is as follows :

while(condition)

{

while(condition)

{

Block of statement(s);

}

Block of statement(s);

}

The syntax of a nested do-while loop is as follows :

do

{

Block of statement(s);

do

{

Block of statement(s);

}

while( condition );

}while( condition );

1. def reverse\_while\_loop(a):

while a < 10:

a = int(input("Enter a number greater than or equal to 10: "))

while a >= 10:

print(a)

a = a - 1

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

reverse\_while\_loop(a)

1. def reverse\_while\_loop():

a = 10

while a >= 1:

print(a)

a = a - 1

reverse\_while\_loop()