ASSIGMENT –1

1.the type of vehicle as a character (like c for cars, b for bus etc.)And number of hours, then calculate charges as given below:

Truck/bus-Rs.20per hour

Car- Rs.10 per hour

ANSWER :

print("Calculate the parking charges below")

a = input("Enter the type of vehicle ('C' for car, 'B' for bus): ").lower()

if a == "c" or a == "b":

hours = int(input("Enter the number of hours:"))

if a == "c":

charges = hours \* 10

print("The parking charges for your car is", charges)

elif a == "b":

charges = hours \* 20

print("The parking charges for your bus is", charges)

else:

print("Invalid vehicle type! choose either options mentioned above")

2.Write a program that displays all the numbers from 1-100 that are not divisible 2 as well as by 3.

print("The numbers that are not divisible by 2 and 3 are:")

for num in range(1, 101):

if num % 2 != 0 and num % 3 != 0:

print(num)

3. Write a program to enter the marks of a student in four subjects. Then calculate the total and aggregate, and display the grade obtained by the student. If the student scores an aggregate greater 75%, then the grade is Distinction. If aggregate is 60>= and <75, then the grade is First Division. If aggregate is 50>= and <60, then the grade is Second Division. If aggregate is 40>= and <50, then the grade is Third Division. Else the grade is Fail.

ANSWER:

print("Enter your marks for below subjects out of 100")

subjects = ["Telugu", "English", "Maths", "Hindi"]

marks = []

for x in subjects:

mark = float(input(f"{x}: "))

while mark < 0 or mark > 100:

print("Invalid input. Marks should be between 0 and 100.")

mark = float(input(f"{x}: "))

marks.append(mark)

total = int(sum(marks))

agg = int((total / (len(subjects) \* 100)) \* 100)

if agg >= 75:

grade = "Distinction"

elif agg >= 60:

grade = "First Division"

elif agg >= 50:

grade = "Second Division"

elif agg >= 40:

grade = "Third Division"

else:

grade = "Fail"

print("Total marks:", total, "/400")

print("Aggregate percentage:", agg, "%")

print("Grade:", grade)

4. Write a python program to calculate GCD of two numbers

def calculate\_gcd(a, b):

while b:

a, b = b, a % b

return a

num1 = int(input("Enter the first number: "))

num2 = int(input("Enter the second number: "))

gcd = calculate\_gcd(num1, num2)

print("The GCD of", num1, "and", num2, "is:", gcd)

5. Write a program to read two numbers and find whether first number is multiple of second number.

def is\_multiple(num1, num2):

if num2 == 0:

return False

return num1 % num2 == 0

num1 = int(input("Enter the first number: "))

num2 = int(input("Enter the second number: "))

if is\_multiple(num1, num2):

print(num1,"is a multiple of",num2)

else:

print(num1,"is not a multiple of",num2)