Programming Assignment_5

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In [ ]:

Q1. Write a Python Program to Find LCM?

Answer:

We know the formula **`hcf * lcm = product of the two numbers`**

In [21]:
```
def HCF_GCD(a,b):
    s=min(a,b)+1
    for i in range(2,s+1):
        if(a%i==0 and b%i==0):
            s=i
    if(s==min(a,b)+1):
        return 1
    else:
        return s
```

In [22]:
```
def LCM(a,b):
    hcf=HCF_GCD(a,b)
    lcm=(a*b)/hcf
    return int(lcm)
```

In [23]:
```
LCM(10,20)
```

Out[23]:
```
20
```

In [24]:
```
LCM(50,3)
```

Out[24]:
```
150
```

In [25]:
```
LCM(20,14)
```

Out[25]:
```
140
```

In [26]:
```
LCM(36,90)
```

Out[26]:
```
180
```

In [ ]:

In [ ]:

Q2. Write a Python Program to Find HCF?

Answer:

In [27]:
```
def HCF(a,b):
    s=min(a,b)+1
    for i in range(2,s+1):
        if(a%i==0 and b%i==0):
            s=i
    if(s==min(a,b)+1):
        return 1
    else:
        return s
```

In [28]:
```
HCF(10,15)
```

Out[28]:
```
5
```

In [29]:
```
HCF(20,60)
```

Out[29]:
```
20
```

In [30]:
```
HCF(15,19)
```

Out[30]:
```
1
```

In [31]:
```
HCF(100,96)
```

Out[31]:
```
4
```

In [ ]:

In [ ]:

Q3. Write a Python Program to Convert Decimal to Binary, Octal and Hexadecimal?

Answer:

In [49]:
```
def binary(a):
    return bin(a)[2:]
def octal(a):
    return oct(a)[2:]
def hexadecimal(a):
    return hex(a)[2:]
```

In [56]:
```
a=int(input("ENter the  number"))
print(f"The binary form of that number is {binary(a)}")
print(f"The octal form of that number is {octal(a)}")
print(f"The hexadecimal form of that number is {hexadecimal(a)}")
```

```
ENter the  number10
The binary form of that number is 1010
The octal form of that number is 12
The hexadecimal form of that number is a
```

In [ ]:

In [57]:
```
a=int(input("ENter the  number"))
print(f"The binary form of that number is {binary(a)}")
print(f"The octal form of that number is {octal(a)}")
print(f"The hexadecimal form of that number is {hexadecimal(a)}")
```

```
ENter the  number25
The binary form of that number is 11001
The octal form of that number is 31
The hexadecimal form of that number is 19
```

In [ ]:

In [ ]:

Q4. Write a Python Program To Find ASCII value of a character?

Answer:

In [58]:
```
a=input("ENter the character")
print(f"The ascii value of that character is {ord(a)}")
```

```
ENter the characterb
The ascii value of that character is 98
```

In [59]:
```
a=input("ENter the character")
print(f"The ascii value of that character is {ord(a)}")
```

```
ENter the characterZ
The ascii value of that character is 90
```

In [ ]:

In [ ]:

Q5. Write a Python Program to Make a Simple Calculator with 4 basic mathematical operations?

Answer:

In [60]:
```
def add(num1, num2):
    return num1 + num2

def subtract(num1, num2):
    return num1 - num2

def multiply(num1, num2):
    return num1 * num2

def divide(num1, num2):
    return num1 / num2

print("Please select operation -\n" \
      "1. Add\n" \
      "2. Subtract\n" \
      "3. Multiply\n" \
      "4. Divide\n")

select = int(input("Select operations form 1, 2, 3, 4 :"))
number_1 = int(input("Enter first number: "))
number_2 = int(input("Enter second number: "))

if select == 1:
    print(number_1, "+", number_2, "=",
                    add(number_1, number_2))
elif select == 2:
    print(number_1, "-", number_2, "=",
                    subtract(number_1, number_2))
elif select == 3:
    print(number_1, "*", number_2, "=",
                    multiply(number_1, number_2))
elif select == 4:
    print(number_1, "/", number_2, "=",
                    divide(number_1, number_2))
else:
    print("Invalid input")
```

```
Please select operation -
1. Add
2. Subtract
3. Multiply
4. Divide

Select operations form 1, 2, 3, 4 :3
Enter first number: 2
Enter second number: 10
2 * 10 = 20
```

In [ ]:

In [61]:
```
def add(num1, num2):
    return num1 + num2

def subtract(num1, num2):
    return num1 - num2

def multiply(num1, num2):
    return num1 * num2

def divide(num1, num2):
    return num1 / num2

print("Please select operation -\n" \
      "1. Add\n" \
      "2. Subtract\n" \
      "3. Multiply\n" \
      "4. Divide\n")

select = int(input("Select operations form 1, 2, 3, 4 :"))
number_1 = int(input("Enter first number: "))
number_2 = int(input("Enter second number: "))

if select == 1:
    print(number_1, "+", number_2, "=",
                    add(number_1, number_2))
elif select == 2:
    print(number_1, "-", number_2, "=",
                    subtract(number_1, number_2))
elif select == 3:
    print(number_1, "*", number_2, "=",
                    multiply(number_1, number_2))
elif select == 4:
    print(number_1, "/", number_2, "=",
                    divide(number_1, number_2))
else:
    print("Invalid input")
```

```
Please select operation -
1. Add
2. Subtract
3. Multiply
4. Divide

Select operations form 1, 2, 3, 4 :2
Enter first number: 100
Enter second number: 95
100 - 95 = 5
```

In [ ]: