# Unit 2 Assignment (Practical)

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```python
#  1. WAP that accepts two integer values n1, n2 from user.
Check if n1 is divisible by n2

n1 = int(input("Enter n1 : "))
n2 = int(input("Enter n2 : "))

if n1 % n2 == 0:
    print(f"{n1} is divisible by {n2}")
else:
    print(f"{n1} is not divisible by {n2}")
```

```python
#  2. WAP that accepts time value in integer (24 hour forma
t). If time entered is less than 12, pring "Good
#  Morning" else if time entered is between 12 to 4, print
"Good Afternoon" else if time is between 4 to 8
#  print "Good Night".


user_time = int(input("Enter the time in 24 hr format : "))

if user_time < 12:
    print("Good morning")
elif user_time > 12 and user_time < 16:
    print("Good Afternoon")
elif user_time > 16 and user_time < 20:
    print("Good Night")
```

```python
'''
3. Write a programe to calculate the electricity bill (acep
t number of unit from user) acording to the
following criteria: Unit price for first 100 units No Charg
```

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e, next 100 units Rs 5 rupees per unit, after 200
units Rs 10 rupees per unit
( For Example if units is 350 than total bill amount is Rs
3500)
'''

units = int(input("Enter the units consumed : "))
total_bill = 0
if units  <= 100 :
    total_bill = 0
elif units > 100 and units <= 200:
    total_bill = units * 5
elif units > 200:
    total_bill = units * 10

print(f"Electricity Bill : {total_bill}")
```

```
# 4. WAP that accepts one integer value n1 from user. Calcu
late the sum of all integers from 1 to n1.

n1 = int(input("Enter n1 : "))

sum = 0

for i in range(1,n1+1):
    sum = i + sum

print(f"Sum from 1 to {n1} is {sum}")
```

```
# 5.  5. WAP that accepts one integer value n1 from user. P
rint all integers from n1 to 1.

n1 = int(input("Enter n1 : "))

for i in range(n1,0,-1):
    print(i , end=" ")
```

```python
#  6. WAP to print the given pattern
'''

5 4 3 2 1
4 3 2 1
3 2 1
2 1
1
'''


n = 5
for i in range(n,0,-1):
    for j in range(i,0,-1):
        print(j,end=" ")
    print()
```

```python
'''
7. WAP that accepts one integer value n1. Create a menu bas
ed on following options:
a) if user enters 1, find if number is prime or not
b) if user enters 2, print all prime numbers between 1 to n
1
c) if user enters 3, print all odd numbers between 1 to n1
d) if user enters 4, print all even numbers between 1 to n1
'''

print("Menu\n")
print("1. find if number is prime or not")
print("2. print all prime numbers between 1 to n1")
print("3. print all odd numbers between 1 to n1")
print("4. print all even numbers between 1 to n1")
choice = int(input("Enter choice : "))


if choice == 1:
    num = int(input("Enter a number : "))
    is_Prime = False
```

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        if num == 1:
            print("1 is not a prime number")
        elif num > 1:
            for i in range(2,num):
                if (num % i == 0):
                    is_Prime == True
                    break
        if is_Prime:
            print(f"{num} is prime number")
        else:
            print(f"{num} is not prime number")

elif choice == 2:
    n1 = int(input("Enter n1 : "))
    for num in range(1,n1+1):
        if num == 1:
            continue
        if num <= 3:
            print(num)
            continue
        if num%2 == 0:
            continue

        isPrime = True
        for i in range(3,num):
            if num % i == 0:
                isPrime = False

        if isPrime:
            print(num,end=" ")

elif choice == 3:
    n1 = int(input("Enter n1 : "))
    print(f"Odd numbers between 1 to {n1}")
    for i in range(1,n1+1,2):
        print(i,end=" ")

elif choice == 4:
```

```python
    n1 = int(input("Enter n1 : "))
    print(f"Even numbers between 1 to {n1}")
    for i in range(2,n1+1,2):
        print(i,end=" ")

else:
    print("Invalid choice...")




'''
 8. WAP that accepts one integer value n1. Create a menu ba
sed on following options:
 a) if user enters 1, find factorial of the number
 b) if user enters 2, print fibonacci from 1 to n1
'''

print("Menu:")
print("Press 1. Factorial of a number ")
print("Press 2. Fibonacci of a number ")
choice = int(input("Enter the choice :"))

if choice == 1:
    print("Factorial of a number : ")
    num = int(input("Enter number : "))
    fact = 1
    for i in range(1,num+1):
        fact = fact * i
    print(f"The factorial of {num} : {fact}")

elif choice == 2:
    print("Fibonacci : ")
    n1 = int(input("Enter a number (n1): "))
    a = 0
    b = 1

    print("Fibonacci series from 1 to", n1, ":")
    while b <= n1:
```

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        if b >= 1:
            print(b, end=' ')
        temp = b
        b = a + b
        a = temp

else:
    print("Invalid input")
```

```python
'''
 9. WAP that accepts one integer value n1. Create a menu ba
sed on following options:
 a) if user enters 1, find factorial of the number
 b) if user enters 2, print fibonacci from 1 to n1
'''

print("Menu:")
print("Press 1. Factorial of a number ")
print("Press 2. Fibonacci of a number ")
choice = int(input("Enter the choice :"))

if choice == 1:
    print("Factorial of a number : ")
    num = int(input("Enter number : "))
    fact = 1
    for i in range(1,num+1):
        fact = fact * i
    print(f"The factorial of {num} : {fact}")

elif choice == 2:
    print("Fibonacci : ")
    n1 = int(input("Enter a number (n1): "))
    a = 0
    b = 1
```

```python
        print("Fibonacci series from 1 to", n1, ":")
        while b <= n1:
            if b >= 1:
                print(b, end=' ')
            temp = b
            b = a + b
            a = temp


    else:
        print("Invalid input")
```

```python
# 10. WAP that accepts one integer value n1. Create a menu
based on following options:
#  a) if user enters 1, print sum of all odd numbers from 1
to n1
#  b) if user enters 2, print sum of all even numbers from
1 to n1


print("Menu")
print("1. For sum of Odd numbers")
print("2. For sum of Even numbers")

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

if choice == 1:
    n1 = int(input('Enter n1 : '))
    print(f"Printing the odd numbers from 1 to {n1} :")
    for i in range(1,n1+1,2):
        print(i,end=" ")
elif choice == 2:
    n1 = int(input('Enter n1 : '))
    print(f"Printing Even number from 1 to {n1} : ")
    for i in range(2,n1,2):
        print(i,end=" ")
else:
    print('Invalid choice!')
```

```
'''
11. WAP that accepts one integer value n1. Create a menu ba
sed on following options:
 a) if user enters 1, caluculate square of n1
 b) if user enters 2, caluculate cube of n1
'''

print("Menu")
print("1. caluculate square")
print("2. caluculate cube")

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

if choice == 1:
    print("Calculating Square : ")
    n1 = int(input("Enter number : "))
    square = n1*n1
    print(f"Sqaure of {n1} : {square}")

elif choice == 2:
    print("Calculating Cube : ")
    n1 = int(input("Enter number : "))
    cube = n1*n1*n1
    print(f"Cube of {n1} : {cube}")

else:
    print("Invalid choice")


'''
12. WAP that accepts two string values s1 and s2. Create a
menu based on following options:
 1. if user enters 1, find length of string
 2. if user enters 2, Concatenate both the strings
 3. if user enters 3, reverse the string
 4. if user enters 4, pring each character of string in new
line
'''
```

```python
s1 = input("Enter s1 : ")
s2 = input("Enter s2 : ")

print("Menu")
print('''
    1. Find length of String
    2. Concate both string
    3. Reverse String
    4. Print each Character of string in a new line
    ''')
choice = int(input("Enter choice : "))

if choice == 1:
    print("PRINTING THE LENGTH OF STRING")
    print(f"Length of s1 {len(s1)}")
    print(f"Length of s2 {len(s2)}")

elif choice == 2:
    print("Concating 2 Strings")
    result = s1+s2
    print(f"{s1} + {s2} = {result}")

elif choice == 3:
    print("Reverse of Strings")
    print(f"Reverse of {s1} : {s1[::-1]}")
    print(f"Reverse of {s2} : {s2[::-1]}")

elif choice == 4:
    print("Printing each character of String in a new line : ")
    print(f"Printing the characters of {s1}")
    for i in s1:
        print(i)
    print(f"Printing the characters of {s2}")
    for i in s2:
        print(i)
```

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else:
    print("Invalid choice...Try again")
```

```
'''
13. WAP taking into consideration following:
 1. Accept string s1.
2. Accept two integer values start and stop.
 3. Print substring from start to stop from string s1
'''

s1 = input("Enter s1 : ")
start = int(input("Enter start : "))
stop = int(input("Enter end : "))

result = s1[start:stop]
print(f"Printing {s1} from {start}th index to {stop}th index : {result}")
```

```
'''
14. WAP that accepts a string s1. Create a menu based on following options:
 1. if user enters 1, check number of uppsercase in string
 2. if user enters 2, check number of lowercase in string
 3. if user enters 3, check number of spaces in string
'''

s1 = input("Enter s1 : ")
print("Menu")
print('''
    1. Check if the string in uppercase
    2. Check if the string is lowercase
    3. Check if the number of spaces in string
    ''')
choice = int(input("Enter choice : "))

if choice == 1:
```

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        print("check if is in uppercase : ")
        if s1.isupper():
            print(f"{s1} is in Uppercase")
        else:
            print(f"{s1} is not in uppercase")

elif choice == 2:
    print("Check if string is in lowercase")
    if s1.islower():
        print(f"{s1} is in Lowercase")
    else:
        print(f"{s1} is not in Lowercase")

elif choice == 3:
    print("Counting the space in the string : ")
    count_of_space = s1.count(' ')
    print(f"Count of spaces in {s1} is : {count_of_space}")

else:
    print("Invalid choice ...")


'''
15. WAP that accepts a string s1. Append the string with "i
ng".
'''

s1 = input("Enter string : ")
result = s1+'ing'
print(f"After adding 'ing' to {s1} : {result}")


'''
16. WAP that accepts a string s1. Pring the longest word in
the string
'''

s1 = input("Ente a string : ")
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words = s1.split()

longest_word = ""
max_length=0

for word in words:
    if len(word) > max_length:
        longest_word = word
        max_length = len(word)

print(f"The longest word in {s1} is {longest_word}")
```