

~~ALOP~~
ηC1C008 dly

Write python code for Temperature converter using classes and objects concept.
To convert temperatures in degrees Fahrenheit to Celsius, subtract 32 and multiply by .5556 (or 5/9).

Example: $(50^{\circ}\text{F} - 32) \times .5556 = 10^{\circ}\text{C}$

Program:

```
class Temperature:
```

```
    def FahToCel(self, f):
```

```
        return (f-32)*.5556
```

```
print("Enter Temperature in Fahrenheit: ", end="")
```

```
fah = float(input())
```

```
ob = Temperature()
```

```
cel = ob.FahToCel(fah)
```

```
print("\nEquivalent Temperature in Celsius = {:.2f}".format(cel))
```

Output:

Enter Temperature in Fahrenheit: 50

Equivalent Temperature in Celsius = 10.00

WAP to input 3 numbers and print second largest number.

Program:

```
list1 = []
n = int(input("Enter number of elements : "))
for i in range(0, n):
    ele = int(input())
    list1.append(ele)
print(list1)
mx=max(list1[0],list1[1])
secondmax=min(list1[0],list1[1])
n =len(list1)
for i in range(2,n):
    if list1[i]>mx:
        secondmax=mx
        mx=list1[i]
    elif list1[i]>secondmax and \
        mx != list1[i]:
        secondmax=list1[i]
print("Second highest number is : ",\
      str(secondmax))
```

Output:

Enter number of elements : 3

10

20

4

[10, 20, 4]

Second highest number is : 10

WAP to print patterns.

Program:

```
def triangle(n):
```

```
    k = n - 1
```

```
    for i in range(0, n):
```

```
        for j in range(0, k):
            print(end=" ")
```

```
        k = k - 1
```

```
        for j in range(0, i+1):
```

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

```
        print("\r")
```

```
n = 3
```

```
triangle(n)
```

Output:

```
*
```

```
* *
```

```
* * *
```

Program:

```
def triangle(n):
```

```
    k = n - 1
```

```
    for i in range(0, n):
```

```
        for j in range(0, k):
```

```
            print(end=" ")
```

```
        k = k - 1
```

```
        for j in range(0, i+1):
```

```
            print(j+1, " ", end="")
```

```
        print("\r")
```

```
n = 3
```

```
triangle(n)
```

WAP to take number from keyboard and prints its equivalent English word.

E. g 21 --> Twenty-One

Program:

```

def convert_to_words(num):

    l = len(num)

    if (l == 0):
        print("empty string")
        return

    if (l > 4):
        print("Length more than 4 is not supported")
        return

    single_digits = ["zero", "one", "two", "three",
                     "four", "five", "six", "seven",
                     "eight", "nine"]

    two_digits = ["", "ten", "eleven", "twelve",
                  "thirteen", "fourteen", "fifteen",
                  "sixteen", "seventeen", "eighteen",
                  "nineteen"]

    tens_multiple = ["", "", "twenty", "thirty", "forty",
                     "fifty", "sixty", "seventy", "eighty",
                     "ninety"]

    tens_power = ["hundred", "thousand"]

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

    if (l == 1):
        print(single_digits[ord(num[0]) - 48])
        return

    x = 0
    while (x < len(num)):

```

```

if (l >= 3):
    if (ord(num[x]) - 48 != 0):
        print(single_digits[ord(num[x]) - 48],
              end=" ")
        print(tens_power[l - 3], end=" ")

    l -= 1

else:

    if (ord(num[x]) - 48 == 1):
        sum = (ord(num[x]) - 48 +
              ord(num[x+1]) - 48)
        print(two_digits[sum])
        return

    elif (ord(num[x]) - 48 == 2 and
          ord(num[x + 1]) - 48 == 0):
        print("twenty")
        return

    else:
        i = ord(num[x]) - 48
        if(i > 0):
            print(tens_multiple[i], end=" ")
        else:
            print("", end="")
        x += 1
        if(ord(num[x]) - 48 != 0):
            print(single_digits[ord(num[x]) - 48])
        x += 1

```

convert_to_words("9923")

convert_to_words("523")

```
convert_to_words("89")
convert_to_words("8")
```

WAP to print prime numbers up to n.

Program:

```
def isPrime(n):

    if(n==1 or n==0):
        return False

    for i in range(2,(n//2)+1):

        if(n%i==0):
            return False

    return True

N = 10;

for i in range(1,N+1):

    if(isPrime(i)):
        print(i,end=" ")
```

Write a program to prompt the user for hours and rate per hour to compute gross pay. If employee works for hours 40 above, then give 1.5times the hourly rate for hours worked.

e.g Enter Hours: 45 Enter Rate: 10 Pay: 475.0

Program:

```
def weeklyPaid(hours, rate):  
    if hours > 40:  
        return 40 * rate + (hours - 40) * rate * 1.5  
    else:  
        return hours * rate  
  
hours = 45  
rate = 10  
  
pay = weeklyPaid(hours, rate)  
print(f"Total gross pay: Rs.{pay:.2f} ")
```

Output:

Total gross pay: Rs.475.00
