1. **Write a Python program to calculate the area of a rectangle given its length and width.**

```
Length = int(input())
Width = int(input())
Area = Length*Width
Print(Area)
```

2. **Write a program to convert miles to kilometres.**

```
miles = float(input())
kilometers = miles * 1.6
print(kilometers, " Kilometers")
```

3. **Write a function to check if a given string is a palindrome.**

```
def isPalindrome(s):
        return s == s[::-1]
s = input()
ans = isPalindrome(s)
if ans:
        print("String is palindrome")
else:
        print("Not a palindrome")
```

4. **Write a Python program to find the second largest element in a list.**

```
L = int(input()).split()
L.sort()
Print(L[-2])
```

5. **Explain what indentation means in Python.**

Indentation refers to the spaces at the beginning of a code line. Where in other programming languages the indentation in code is for readability only, the indentation in Python is very important. Python uses indentation to indicate a block of code. Python indentation is a way of telling a Python interpreter that the group of statements belongs to a particular block of code.

6. **Write a program to perform set difference operation.**

```
A={1,4,2,7,5,8,3,4}
B={5,3,8,1,9,7,3,8}
Print(A-B)
```

7. **Write a Python program to print numbers from 1 to 10 using a whileloop.**

```
N=1;
While N<=10:
    Print(N)
    N+=1
```

8. **Write a program to calculate the factorial of a number using a while loop.**

```
Num = int(input())
Fact = 1;
While Num>0:
    fact = fact*Num
```

```
        Num-=1
print(Fact)
```

9. Write a Python program to check if a number is positive, negative, or zero using if-elif-else statements.

```
n=int(input())
if(n>0):
    print("number is positive")
elif(n<0):
    print("number is negative")
else:
    print("number is zero")
```

10. Write a program to determine the largest among three numbers using conditional statements.

```
a=int(input())
b=int(input())
c=int(Input())
if a>=b and a>==c :
    print("a is largest")
elif b>=c and b>=a :
    print("b is largest")
else:
    print("c is largest")
```

11. Write a Python program to create a numpy array filled with ones of given shape.

```
Import numpy as np
shape=(3,4)
ones = np.ones(shape)
print(ones)
```

12. Write a program to create a 2D numpy array initialized with random integers.

```
Import numpy as np
rows = 3
colums = 4
low  = 1
high = 10
random_array=np.random.randit(low,high,size=(rows,coloums))
print(random_array)
```

13. Write a Python program to generate an array of evenly spaced numbers over a specified range using linspace.

```
Import numpy as np
start=0
stop=10
num=5
print(np.linspace(start,stop,num))
```

14. Write a program to generate an array of 10 equally spaced values between 1 and 100 using linspace.

```
Import numpy as np
Print(np.linspace(1,100,10))
```

15. Write a Python program to create an array containing even numbers from 2 to 20 using arange.

```
Import numpy as np
Print(np.arange(2,21,2))
```

16. Write a program to create an array containing numbers from 1 to 10 with a step size of 0.5 using arange.

```
Import numpy as np
Print(np.arrange(1,10.5,0.5))
```