Lecture 10

User defined functions

creating and calling a function

In [2]:
```
def my_function():
    print("hello i am swati")
```

In [3]:
```
my_function()
```

```
hello i am swati
```

In [4]:
```
def details_bill():
    print("the last date of the bill payment is on next week sunday")
    print("after deadline, you need to pay rs 1000 as a fine")
    print("pay your bill soon")
```

In [5]:
```
for i in range(3):
    a = input("enter your name")
    b = int(input("enter the unit os electricity you have consumed"))
    bill = b * 10
    print("total amount of bill ypou need to pay is", bill)
    details_bill()
```

```
enter your nameswati
enter the unit os electricity you have consumed500
total amount of bill ypou need to pay is 5000
the last date of the bill payment is on next week sunday
after deadline, you need to pay rs 1000 as a fine
pay your bill soon
enter your namenishant
enter the unit os electricity you have consumed200
total amount of bill ypou need to pay is 2000
the last date of the bill payment is on next week sunday
after deadline, you need to pay rs 1000 as a fine
pay your bill soon
enter your nameayush
enter the unit os electricity you have consumed650
total amount of bill ypou need to pay is 6500
the last date of the bill payment is on next week sunday
after deadline, you need to pay rs 1000 as a fine
pay your bill soon
```

Arguments

Create a function, which checks the number is even or odd

In [9]:
```
def check_even_odd(number):
    if number%2==0:
        print("the number is even")
    else:
        print("the number is odd")
```

In [11]:
```
check_even_odd(24)
```

```
the number is even
```

In [12]:
```
check_even_odd(37)
```

```
the number is odd
```

2 arguments

In [13]:
```
def my_name(fname, lname):
    print(fname + " " + lname)
```

In [17]:
```
my_name("swati" , "dhote")
```

```
swati dhote
```

In [ ]:
```
Write a user-defined function to process the exam scores and calculate the fol

The average exam score.
The highest exam score.
The lowest exam score.
The number of students who passed the exam (assuming a passing score is 80 or a
The number of students who failed the exam.

exam_scores = [85, 92, 78, 90, 88, 95, 82, 79, 87, 91]
```

In [18]:
```
def calculate_exam_statistics(exam_scores):

    num_students = len(exam_scores)
    average_score = sum(exam_scores)/num_students
    highest_score = max(exam_scores)
    lowest_score = min(exam_scores)

    num_passed = 0
    for score in exam_scores:
        if score>=80:
            num_passed = num_passed+1

    num_failed = num_students - num_passed

    return average_score, highest_score, lowest_score, num_passed, num_failed
```

In [19]:
```
exam_scores = [85, 92, 78, 90, 88, 95, 82, 79, 87, 91]

average_score, highest_score, lowest_score, num_passed, num_failed = calculate_

print("the average score is", average_score)
print("the highest score is", highest_score)
print("the lowest score is", lowest_score)
print("the number of students passed is", num_passed)
print("the number of students failed is", num_failed)
```

```
the average score is 86.7
the highest score is 95
the lowest score is 78
the number of students passed is 8
the number of students failed is 2
```

In [ ]:
```

```