# Lab 1

1- Pretend that you have just opened a new savings account that earns 4 percent interest per year. The interest that you earn is paid at the end of the year and is added to the balance of the savings account. Write a program that begins by reading the amount of money deposited into the account from the user. Then your program should compute and display the amount in the savings account after 1, 2, and 3 years. Display each amount so that it is rounded to 2 decimal places (1 mark).

Sample Output:

```
Welcome to your SenecaBank savings account.

How much would you like to deposit?: $100

 Deposit successful.  Your account has a 4% annual interest
rate.
 Your projected savings growth is:

        Your current balance: $100.00
        After 1 year: $104.00
        After 2 years: $108.16
        After 3 years: $112.49

 Thank you for choosing SenecaBank. Have a nice day!
```

2- Consider the software that runs on a self-checkout machine. One task that it must be able to perform is to determine how much change to provide when the shopper pays for a purchase with cash. Write a program that begins by reading some cents from the user as an integer. Then your program should compute and display the denominations of the coins that should be used to give that amount of change to the shopper. The change should be given using as few coins as possible. Assume that the machine is loaded with pennies, nickels, dimes, quarters, loonies, and toonies (2 marks).

Sample output:

```
hank you for shopping at Seneca  Mart.

low much change is required? Please input an amount
n cents: 346

The following coins will be dispensed:

        Toonies: 1
        Loonies: 1
        Quarters: 1
        Dimes: 2
        Nickels: 0
        Pennies: 1

You will receive 6 coins in total.  Have a nice day!
```

3- Develop a program that begins by reading the number of seconds from the user. Then your program should display the equivalent amount of time in form of D:HH:MM:SS, where D, HH, MM, and SS represent days, hours, minutes, and seconds respectively. The hours, minutes, and seconds should all be formatted so that they occupy exactly two digits, with a leading 0 displayed if necessary(2 marks).

Sample outputs:

```
elcome to the seconds calculator.

lease enter a number of seconds you would like to
onvert to D:HH:MM:SS format: 3400

3400 seconds is 0:00:56:40

That's over half an hour!
```

```
elcome to the seconds calculator.

lease enter a number of seconds you would like to
onvert to D:HH:MM:SS format: 60

60 seconds is 0:00:01:00

That's a few minutes!
```

```
Welcome to the seconds calculator.

Please enter a number of seconds you would like to
convert to D:HH:MM:SS format: 895604

 895604 seconds is 10:08:46:44

 That's over a week!
```