**Lab 6**

Q1. Write a program called ‘setSail.c’ which has to print the location of a ship using variables, latitude and longitude. L**atitude** is how far **north or south** the ship is, and **longitude** is her position **east or west**. Input will be in the form of positive and negative integers. *Note: Minus sign denotes Southern hemisphere or West of meridian, Positive denotes Northern hemisphere or East of meridian.*

This program has five functions:

* A function sail\_southEast. Change both latitude and longitude by 1. *Note*: *No other line of code must be there like print*

Old position: 11 and 22; new position 10 and 23.

Old position: -11,-22; new position -12 and -21.

* A function sail\_southWest. Change both latitude and longitude by 1. *Note*: *No other line of code must be there like print*

Old position: 11 and 22; new position 10 and 21.

Old position: -11,-22; new position -12 and -23.

* A function sail\_northEast. Change both latitude and longitude by 1. *Note*: *No other line of code must be there like print*

Old position: 11 and 22; new position 12 and 23.

Old position: -11,-22; new position -10 and -21

* A function sail\_northWest. Change both latitude and longitude by 1. *Note*: *No other line of code must be there like print*

Old position: 11 and 22; new position ?.

Old position: -11,-22; new position ?

* A main function that takes a given latitude and longitude of the ship from the user. Make the ship move 2 times south east, once north east, once north west and finally once south west. Each time print the latitude and longitude.

Test Case: Input Latitude, longitude: 11,22

TC2: -11,22

TC3: 11,-22

TC3: -11,-22

Q2. Write a program to find the minimum of 2 positive numbers without comparing the numbers, a and b.

1. Extend this to minimum of 3 positive numbers.
2. Extend this to minimum of n positive numbers.