Term 2 - Assignment 1

1. Show how you would extract the number 1.124 from the string "Hello 1.124 World!" and then store it in a float variable.

2. An abstract class has a construtor which prints "This is constructor of abstract class", an abstract method named 'a_method' and a non-abstract method which prints "This is a normal method of abstract class". A class 'SubClass' inherits the abstract class and has a method named 'a_method' which prints "This is abstract method". Now create an object of 'SubClass' and call the abstract method and the non-abstract method.

3. Create an abstract class 'AURCTBank' with an abstract method 'balanceCheck'. 100000, 300000 and 500000 are credited in banks CSE, ECE and GEO respectively. 'BankCSE', 'BankECE' and 'BankGEO' are subclasses of class 'AURCTBank', each having a method named 'balanceCheck'. You can call this method by creating an object of each of the 3 classes.

4. We have to calculate the percentage of marks obtained in three subjects (each out of 100) by student Z and in four subjects (each out of 100) by student Y. Create an abstract class 'UGMarks' with an abstract method 'getPercentage'. It is inherited by two other classes 'Z' and 'Y' each having a method with the same name which returns the percentage of the students. The constructor of student Z takes the marks in three subjects as its parameters and the marks in four subjects as its parameters for student Y. Create an object for each of the two classes and print the percentage of marks for both the students.

5. Create an abstract class 'DomesticAnimals' with two abstract methods 'kitten' and 'puppy'. Now create a class 'Kitten' with a method ‘kitten’ which prints "Kittens meow" and a class 'Puppy' with a method 'puppy' which prints "Puppies bark", both inheriting the class 'DomesticAnimals'. Now create an object for each of the subclasses and call their respective methods.