Assignment 6

Q1. Define a new exception, called ExceptionLineTooLong, that prints out the error message "The strings is too long". Write a program that reads a String from user and calculates its length. and throws an exception of type ExceptionLineTooLong in the case where a string of length is more than 80 characters.
(Hint- Use String class length() method)

Q2. Build a new Circle class with the following basic features:

- Attributes:
  - Center point - Build instance variables for the circle's center point (use Point2D class objetc).
  - Diameter - Build an instance variable for the circle's diameter (myDiameter also represented as a double value).
- Behaviors
  - Default constructor - Build a default constructor that initializes the circle's center point to (0, 0) and its diameter to 100.
  - Accessor methods - Build accessor methods for the two center coordinates and the diameter.
- Invariant
  - The circle's diameter should always be non-negative. maintain the integrity of each circle object by ensuring that the class invariant (that the diameter should be non-negative) is true at all times.
  - If the diameter is negative then throw user defined exception.

Optional Assignment Question -> Not Compulsary

Q4. Create an array of ElectronicsStock of size 3 to keep 3 products

Store Mobile Instance on 0th index of array

Store TV Instance on 1st index of array

Store Washing Machine Instance on 2nd index of array

* Write a menu driven code to

1.add these products into array along with qty

2.display all products along with qty class)

3.purchase product(If qty is 0 then raise exception of above execption

* purchase should happen only if qty is greater than 0 and after purchase the qty should decrement

Use the below given Skleton.

```
abstract class Electronics {
String model;
String description;
double price;
// to accept electronnics field data
void accept() {
}
abstract void acceptData();
// to print electronnics field data
void print() {
}
abstract void printData();
}
class Mobile extends Electronics {
int ram;
int storage;
// override acceptdata and printdata
// call super class accept and print method in it.
}
class Tv extends Electronics {
int screen_inches;
int pixel_density;
// override acceptdata and printdata
// call super class accept and print method in it.
}
```