# Practical - 04

==========================================================================

**Student Name**    : Vinni Fengade

**Roll No.**        : 67

**Sem & Sec**       : 4 CSE [B]

**Course Name**     : Object Oriented Programming (CSP256)

**Date Compiled**   : 17-June-2022
==========================================================================

## Problem Statements:

--------------------------------------------------------------------------------

### 5.Exception Handling

5. Create a class IPL. The datamembers are Team_Name, total matches played, number of matches won and lost. Create a method Register_Team, which will take Team Name as a Parameter. If the name contains any number or special character it will throw a user defined exception "InvalidTeamName". The exception class will display the message which parameter is not satisfied.

Create a method update count, which will update the number of matches won and lost. If the sum of number of matches won and lost is not equal to total matches played then throw user defined exception "InvalidCountException". If the numbers of matches lost are more than 40% then display the message you are disqualified.


Use proper Exception handling mechanism to handle the exception.


### 6.File Handling

6. Create a class IPL. The data Team_Name, number of matches won and lost is written in the file name "IPL.txt".  Read the file and store the data in object. Create array of objects and demonstrate all functionalities of IPL Class defined in **Problem definition 5.**

---------------------------------------------------------------------------------
**<u>Code</u>**
---------------------------------------------------------------------------------

# File :<u>Main.java</u>

package com.mycompany.practical5_6;

import java.io.*;

public class Practical5_6 {

    public static void main(String[] args) throws IOException {

        try{

        FileReader f1= new
FileReader("C:\\Users\\User\\Documents\\NetBeansProjects\\Practical5_6\\src\\mai
n\\java\\com\\mycompany\\practical5_6\\Input\\IPL.txt");

        BufferedReader br = new BufferedReader(f1);

        int i=0;

        String[] str=new String[4];

        String s ,temp;

        IPL[] team = new IPL[4];

        team[0]=new IPL();

        team[1]=new IPL();

        team[2]=new IPL();

        team[3]=new IPL();


        while((s=br.readLine())!=null){

            temp=s;

            System.out.println("");

            System.out.println(s);


            str=temp.split(" ");

            String name =str[0];

            int total=Integer.parseInt(str[1]);

            int won=Integer.parseInt(str[2]);

            int lose=Integer.parseInt(str[3]);

```java
            team[i].Register_Team(name);

            if(team[i].Team_Name!=null)

                team[i].update_count(total,won,lose);

            i++;

        }

     }

      catch(IOException e){

          System.out.println("File not Found");

    }

}
```

## File :IPL.java

```java
package com.mycompany.practical5_6;


public class IPL extends Exception  {

    String Team_Name;

    int tm_played,m_won,m_lost;

     IPL(){


     }

    void Register_Team(String name){

        try{

            char[] n= new char[name.length()];

            n =name.toCharArray();

            for(char ch:n){

                if(!(((ch>='A' && ch<='Z') || (ch>='a' && ch<='z')))){

                    throw new InvalidTeamName(name,ch);

                }

            }

            this.Team_Name=name;

            System.out.println("Team Name "+name+" Registered Successfully");

        }catch(InvalidTeamName E){

            System.out.println(E);

        }

    }
```

```java
    void update_count(int tm,int won,int lost){
        this.m_won=won;
        this.m_lost=lost;
        this.tm_played=tm;
        try{
            if(m_won+m_lost != tm_played){
                throw new InvalidCountException();
            }
        }catch(InvalidCountException E){
            System.out.println("Invalid Match Count");
        }
        if(m_won+m_lost == tm_played)
        if((m_lost*100)/tm_played >=40){
            System.out.println("Team "+this.Team_Name+" Dis-qualified");
        }else{
            System.out.println("Team "+Team_Name+" Qualified");
        }
    }
}
```

## File : **InvalidCountException.java**

```java
public class InvalidCountException extends Exception{
    int count;
    InvalidCountException(){

    }
    public String toString(){
        return ("Invalid Match Count ");
    }
}
```
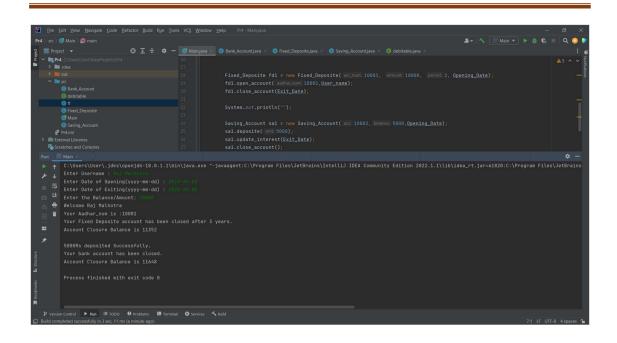
File : **InvalidTeamName.java**

```
package com.mycompany.practical5_6;

public class InvalidTeamName extends Exception{

    String name;

    char ch;

    InvalidTeamName(String name,char c){

        this.name=name;

        ch=c;

    }

    public String toString(){

        return ("Invalid Team Name :  "+name+"  due to \""+ch+"\"" );

    }
}
```

--------------------------------------------------------------------------------
                                **Execution**
--------------------------------------------------------------------------------

```
-------------< com.mycompany.practical5_6:Practical5_6 >---------------
Building Practical5_6 1.0-SNAPSHOT
-----------------------------[ jar ]------------------------------

--- exec-maven-plugin:3.0.0:exec (default-cli) @ Practical5_6 ---

CSK 10 8 2
Team Name CSK Registered Successfully
Team CSK Qualified

C@SK 10 8 2
Invalid Team Name :  C@SK  due to "@"

CSK 11 8 2
Team Name CSK Registered Successfully
Invalid Match Count

CSK 10 6 4
Team Name CSK Registered Successfully
Team CSK Dis-qualified
------------------------------------------------------------------
BUILD SUCCESS
------------------------------------------------------------------
Total time:  0.863 s
Finished at: 2022-06-17T20:03:44+05:30
------------------------------------------------------------------
```