



Subject: SBL-OOPJ

Class: SE-Data Science

Semester: III

A.Y. 2022-2023

Experiment No. 10

❖ **Aim :** Write a Java program to create user-defined exception.

Theory :

Exceptions abnormally terminate the execution of a program.

This is why it is important to handle exceptions. Here's a list of different approaches to handle exceptions in Java.

Types of exception:

1. Build-in exception
2. User-defined exception

User-defined Exception:

Java user-defined exception is a custom exception created and throws that exception using a keyword 'throw'. It is done by extending a class 'Exception'. An exception is a problem that arises during the execution of the program. In Object-Oriented Programming language, Java provides a powerful mechanism to handle such exceptions. Java allows to create own exception class, which provides own exception class implementation. Such exceptions are called user-defined exceptions or custom exceptions.

while creating an exception class, it needs to be extended from java. lang.Exception.

An exception is an event that leads to sudden termination of the program during execution at runtime.

Algorithm:

Create a user-defined exception class called MyException

Throw an exception of user-defined type as an argument in main()

The exception is handled using try, catch block

Display the user-defined exception

Example:

Simple User-defined exception in Java

```
class SampleException{  
public static void main(String args[]){
```



```
try{
throw new UserException(400);
}
catch(UserException e){
System.out.println(e) ;
}
}
}
class UserException extends Exception{
int num1;
UserException(int num2) {
num1=num2;
}
public String toString(){
return ("Status code = "+num1) ;
}
}
```

Program:

```
class InvalidAgeException extends Exception{
InvalidAgeException(String s){
super(s);
}
}
public class Main{
public static void main(String args[]){
try{
validate(13);
}catch(Exception m){System.out.println("Exception occurred: "+m);}
}
static void validate(int age)throws InvalidAgeException{
if(age<18)
```



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```
throw new InvalidAgeException("not valid");  
else  
System.out.println("welcome to vote");  
}  
}
```

OUTPUT:

Exception occurred : Invalid Age Exception : not valid