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Core Java Assignment 4

**Assignments on Exception Handling**

1. Write an application that accepts two numbers, divide the first number with the second number and display the result. Hint: You need to handle ArithmeticException which is thrown when there is an attempt to divide a number by a zero.

**package** ExceptionHandling;

**import** java.util.Scanner;

**public** **class** DivideNumber {

**public** **static** **void** main(String arg[])

{

**try**

{

**int** a,b,c;

Scanner sc =**new** Scanner(System.***in***);

System.***out***.print("Enter 1st no. : ");

a=sc.nextInt();

System.***out***.print("Enter 2nd no. : ");

b=sc.nextInt();

c=a/b;

System.***out***.println("Result:"+c);

}

**catch**(ArithmeticException e)

{

System.***out***.println("Error:"+e.getMessage());

System.***out***.println("Error:"+e);

}

System.***out***.println("End of Program...");

}

}

**Output:**

Enter 1st no. : 9

Enter 2nd no. : 0

Error:/ by zero

Error:java.lang.ArithmeticException: / by zero

End of Program...

1. Carrying forward with the above problem, handled **ArithmeticException** by raising **UnsupportedOperationException** as a solution.

**package** ExceptionHandling;

**import** java.util.Scanner;

**public** **class** DivideNumber {

**public** **static** **void** main(String arg[])

{

**try**

{

**int** a,b,c;

Scanner sc =**new** Scanner(System.***in***);

System.***out***.print("Enter 1st no. : ");

a=sc.nextInt();

System.***out***.print("Enter 2nd no. : ");

b=sc.nextInt();

c=a/b;

System.***out***.println("Result:"+c);

}

**catch**(ArithmeticException e)

{

System.***out***.println("Error:"+e.getMessage());

System.***out***.println("Error:"+e);

System.***out***.println("UnsupportedOperationException");

}

System.***out***.println("End of Program...");

}

}

**Output:**

Enter 1st no. : 9

Enter 2nd no. : 0

Error:/ by zero

Error:java.lang.ArithmeticException: / by zero

UnsupportedOperationException

End of Program...

1. Perform withdraw functionality with saving account object.

i)Raise InsufficientBalanceException if you are trying to withdraw more than balance.

**package** ExceptionHandling;

**import** java.util.Scanner;

**class** InsufiBalanceException **extends** RuntimeException{

}

**public** **class** Exception1 {

Scanner sc = **new** Scanner(System.***in***);

**public** **void** withdrawal(**double** a)

{

System.***out***.println("Enter your Id ");

**long** id = sc.nextLong();

System.***out***.println("Enter your balance ");

**double** b = sc.nextDouble();

**try** {

**if**(a<=b) {

b = b - a;

System.***out***.println("Balance= " + b);

}

**else** {

**throw** **new** InsufiBalanceException();

}

}

**catch** (InsufiBalanceException e) {

e.printStackTrace();

}

}

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

Exception1 s = **new** Exception1();

s.withdrawal(500);

}

}

**Output:**

Enter your Id

030303

Enter your balance

303030

Balance= 302530.0

ii) Raise a illigalBankTransaction if you are trying to withdraw negative amount from account.

**package** ExceptionHandling;

**import** java.util.Scanner;

**class** illigalTransactionException **extends** RuntimeException{

}

**public** **class** Exception1 {

Scanner sc = **new** Scanner(System.***in***);

**public** **void** withdrawal(**double** a)

{

System.***out***.println("Enter your Id ");

**long** id = sc.nextLong();

System.***out***.println("Enter your balance ");

**double** b = sc.nextDouble();

**try** {

**if**(a>0) {

System.***out***.println("Balance= " + b);

}

**else** {

**throw** **new** illigalTransactionException();

}

}

**catch** (illigalTransactionException e) {

e.printStackTrace();

}

}

**public** **static** **void** main(String[] args) {

Exception1 s = **new** Exception1();

s.withdrawal(-10201);

}}

**Output:**

Enter your Id

040404

Enter your balance

404040

ExceptionHandling.illigalTransactionException

at ExceptionHandling.Exception1.withdrawal(Exception1.java:22)

at ExceptionHandling.Exception1.main(Exception1.java:32)