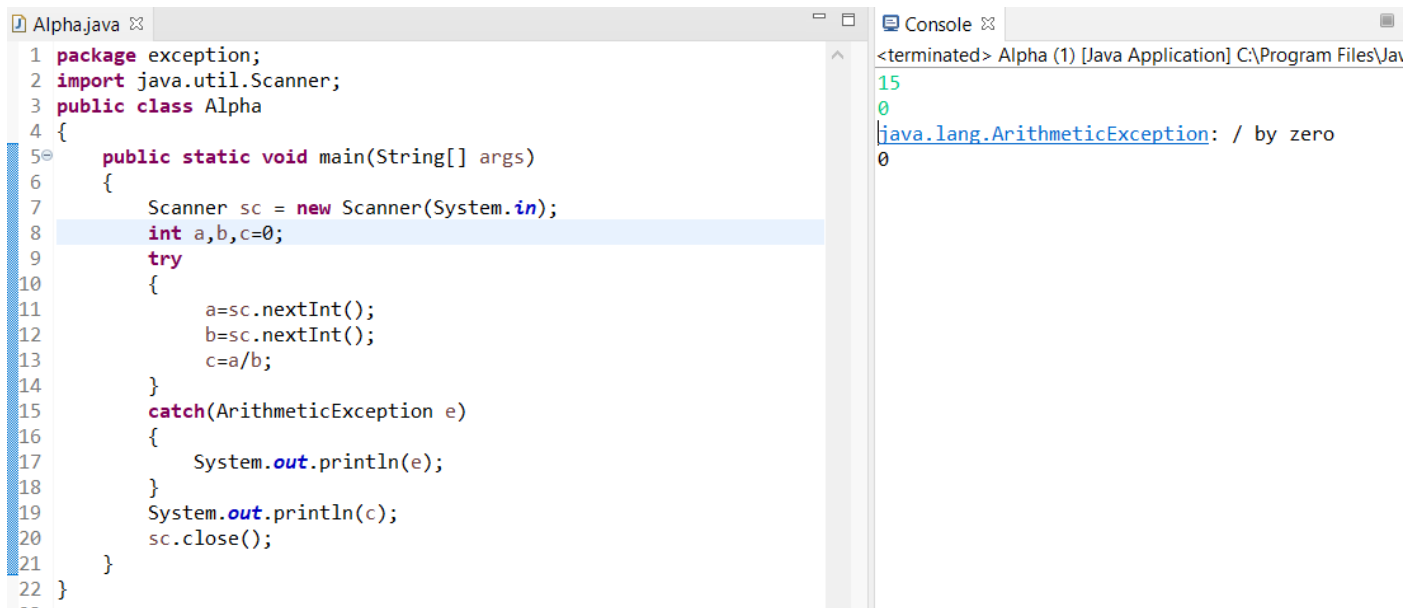


## Assignments on Exception Handling

1) Write an application that accepts two numbers, divides 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 zero.



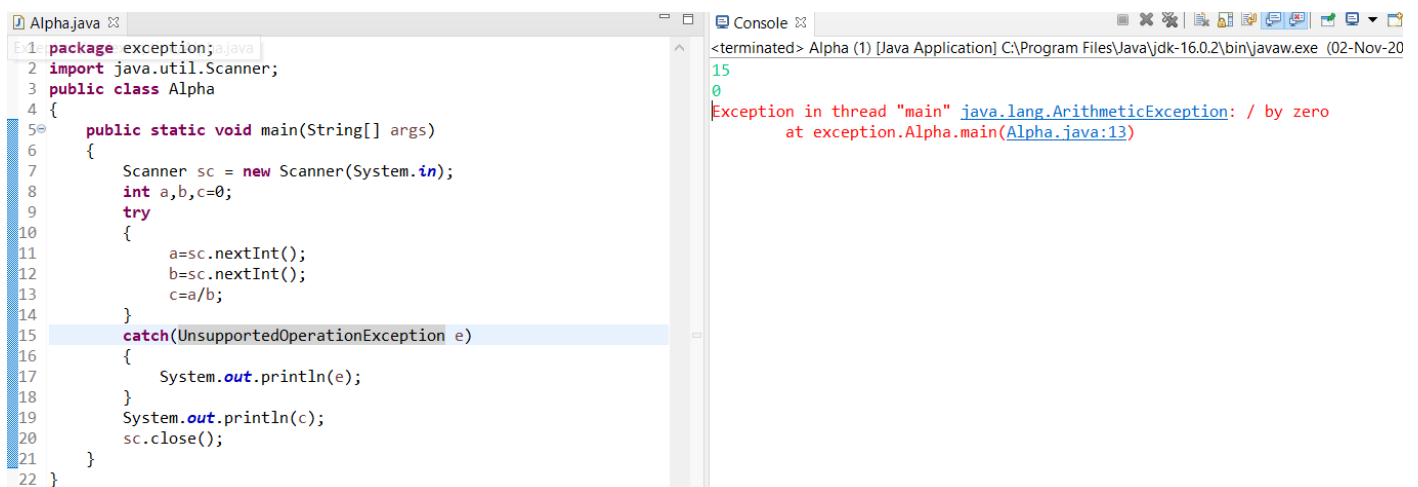
The screenshot shows an IDE with a file named `Alpha.java` and a console window. The Java code in `Alpha.java` is as follows:

```
1 package exception;
2 import java.util.Scanner;
3 public class Alpha
4 {
5     public static void main(String[] args)
6     {
7         Scanner sc = new Scanner(System.in);
8         int a,b,c=0;
9         try
10        {
11            a=sc.nextInt();
12            b=sc.nextInt();
13            c=a/b;
14        }
15        catch(ArithmeticException e)
16        {
17            System.out.println(e);
18        }
19        System.out.println(c);
20        sc.close();
21    }
22 }
```

The console window shows the output of the program:

```
<terminated> Alpha (1) [Java Application] C:\Program Files\Java\jdk-16.0.2\bin\javaw.exe (02-Nov-20)
15
0
java.lang.ArithmeticException: / by zero
0
```

2) Carrying forward with the above problem, handle `ArithmeticException` by raising `UnsupportedOperationException` as a solution.



The screenshot shows an IDE with a file named `Alpha.java` and a console window. The Java code in `Alpha.java` is as follows:

```
1 package exception;
2 import java.util.Scanner;
3 public class Alpha
4 {
5     public static void main(String[] args)
6     {
7         Scanner sc = new Scanner(System.in);
8         int a,b,c=0;
9         try
10        {
11            a=sc.nextInt();
12            b=sc.nextInt();
13            c=a/b;
14        }
15        catch(UnsupportedOperationException e)
16        {
17            System.out.println(e);
18        }
19        System.out.println(c);
20        sc.close();
21    }
22 }
```

The console window shows the output of the program:

```
<terminated> Alpha (1) [Java Application] C:\Program Files\Java\jdk-16.0.2\bin\javaw.exe (02-Nov-20)
15
0
Exception in thread "main" java.lang.ArithmeticException: / by zero
at exception.Alpha.main(Alpha.java:13)
```

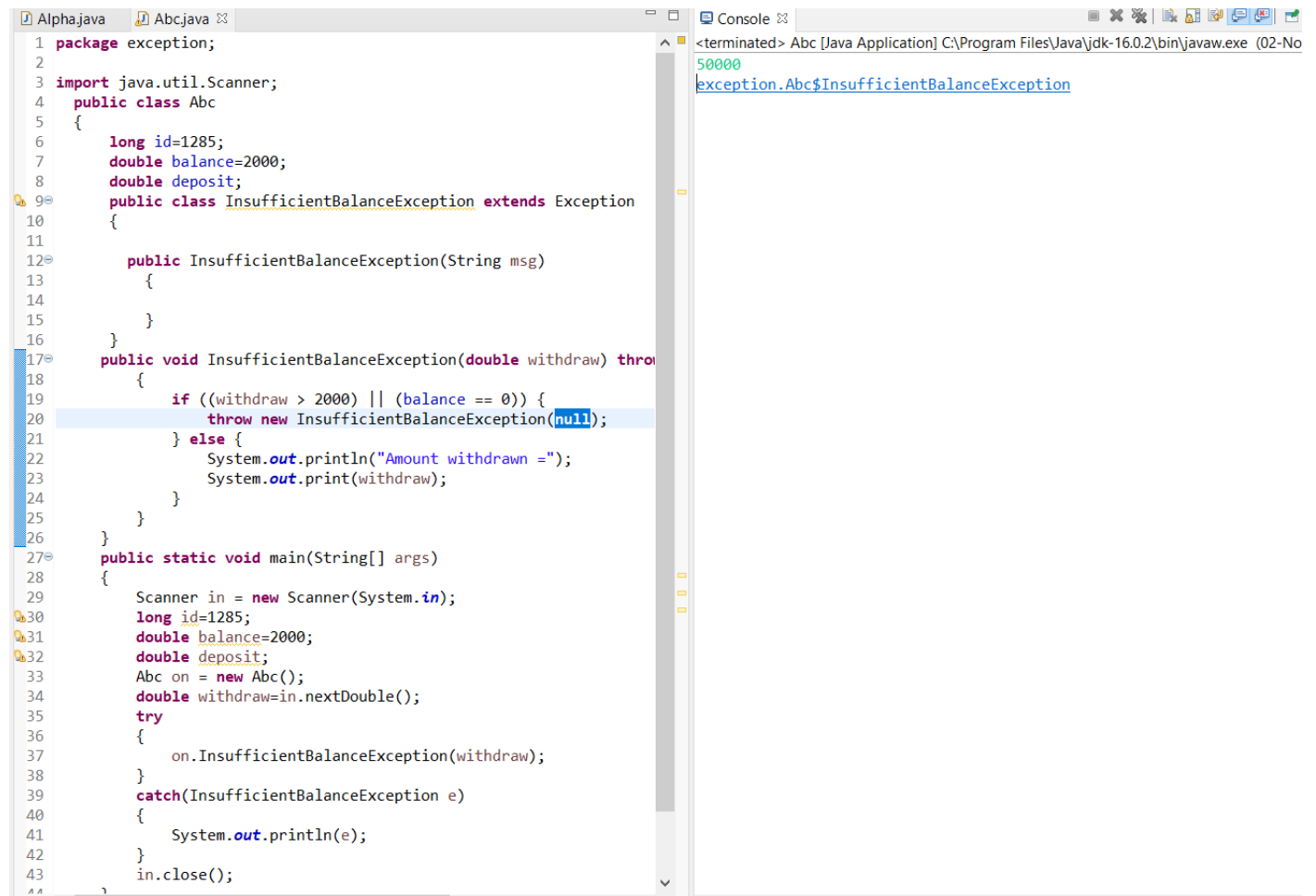
3) Write an application to perform withdraw functionality on a `SavingAccount` object. Point to

note:

- Raise `InsufficientBalanceException` if you are trying to withdraw more than balance or when you balance is zero. E.g. if you balance is 2000 and if you are trying to withdraw 2100 or if you balance is 0 and you are trying to withdraw positive value.
- Raise `IllegalBank TransactionException` if you are trying to withdraw a negative value from your balance. E. g. if you try to withdraw a negative value `savingAcc.withdraw(1000);`

Note: SavingAccount

--longid --double balance I-double withdraw(double amount) I-double deposit(double amount)



The screenshot shows an IDE with two tabs: 'Alphajava' and 'Abcjava'. The 'Abcjava' tab is active, displaying the following Java code:

```
1 package exception;
2
3 import java.util.Scanner;
4 public class Abc
5 {
6     long id=1285;
7     double balance=2000;
8     double deposit;
9     public class InsufficientBalanceException extends Exception
10    {
11
12        public InsufficientBalanceException(String msg)
13        {
14
15        }
16    }
17    public void InsufficientBalanceException(double withdraw) throws
18    {
19        if ((withdraw > 2000) || (balance == 0)) {
20            throw new InsufficientBalanceException(null);
21        } else {
22            System.out.println("Amount withdrawn =");
23            System.out.print(withdraw);
24        }
25    }
26    }
27    public static void main(String[] args)
28    {
29        Scanner in = new Scanner(System.in);
30        long id=1285;
31        double balance=2000;
32        double deposit;
33        Abc on = new Abc();
34        double withdraw=in.nextDouble();
35        try
36        {
37            on.InsufficientBalanceException(withdraw);
38        }
39        catch(InsufficientBalanceException e)
40        {
41            System.out.println(e);
42        }
43        in.close();
44    }
```

The 'Console' tab on the right shows the output of the program:

```
<terminated> Abc [Java Application] C:\Program Files\Java\jdk-16.0.2\bin\javaw.exe (02-No
50000
exception.Abc$InsufficientBalanceException
```