

## INTRODUCTION B

## Source Code:

```

package introduction;
import java.util.*;
public class BSCS2_Marasigan_IntroductionB
{
    public static void main(String[] args)
    {
        int choice=0;
        char d='N';
        Scanner in = new Scanner(System.in);
        do
        {
            System.out.print("INPUT STRING 1:\t");
            String one = in.nextLine();
            System.out.print("INPUT STRING 2:\t");
            String two = in.nextLine();
            String three = "String 3 does not have any value yet.";
            do
            {
                System.out.print("\nOPTIONS:\n1. String Copy"
                    + "\n2. String concatenation\n3. String Comparison"
                    + "\n4. Reverse a string input\n5. Convert a string input "
                    + "(uppercase to lowercase & lowercase to upper case)"
                    + "\n6. Toggle a string\n7. Exit\n\nEnter option [1..7]:\t");
                choice = in.nextInt();
                int ans = 0, ans2 = 0;
                String first, second;

                switch (choice)
                {
                    case 1: System.out.print("What String do you want to copy?"
                        + "\n Please type String no. [1,2]: ");
                        ans = in.nextInt();
                        three = answerFinder(ans, one, two, three);
                        System.out.println("String 3 is: " + three);
                        break;

                    case 2: System.out.print("What String do you want to concatenate?"
                        + "\n Please type two String nos. [1,2,3]: ");
                        ans = in.nextInt(); ans2 = in.nextInt();
                        first = answerFinder(ans, one, two, three);
                        second=answerFinder(ans2, one, two, three);
                        System.out.println(first.concat(second));
                        break;

                    case 3: System.out.print("What String do you want to compare?"
                        + "\n Please type two String nos. [1,2,3]: ");
                        ans = in.nextInt(); ans2 = in.nextInt();
                        first = answerFinder(ans, one, two, three);

```

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Video: [https://drive.google.com/file/d/17Kr3tSEzd8RagEqIQWinLR\\_UbLHKRvI/view?usp=sharing](https://drive.google.com/file/d/17Kr3tSEzd8RagEqIQWinLR_UbLHKRvI/view?usp=sharing)

## DATA STRUCTURES & ALGORITHM

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Feb. 10, 2022

```
second=answerFinder(ans2, one, two, three);
comparison(first, second);
break;

case 4: System.out.print("What String do you want to reverse?"
+ "\n Please type String no. [1,2,3]: ");
ans = in.nextInt();
first = answerFinder(ans, one, two, three);
StringBuilder r = new StringBuilder();
r.append(first);
System.out.println(r.reverse());
break;

case 5: System.out.print("What String do you want to Convert?"
+ "\n Please type String no. [1,2,3]: ");
ans = in.nextInt();
first = answerFinder(ans, one, two, three);
System.out.println("Uppercase:\t" + first.toUpperCase()
+ "\nLowercase:\t" + first.toLowerCase());
break;

case 6: System.out.print("What String do you want to Toggle?"
+ "\n Please type String no. [1,2,3]: ");
ans = in.nextInt();
first = answerFinder(ans, one, two, three);
System.out.println("\nThe toggled word is " + toggler(first));
break;

case 7: d = 'N'; break;
}
if (choice < 7)
{
    System.out.print("\nWant to try other options? [Y/N]:\t");
    String decide = in.next().toUpperCase();
    d = decide.charAt(0);
}
}while (d == 'Y');

if (choice < 7)
{
    System.out.print("Want to try other String input? [Y/N]:\t");
    String decide = in.next().toUpperCase();
    d = decide.charAt(0);
    System.out.println();//just a space
}
in.nextLine();//fixes the skipping when loop by absorbing the line input of variable char

}while (d == 'Y');
end();
in.close();
}

static String answerFinder(int a, String one, String two, String three)
```

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```

{
    String str = "";
    switch (a)
    {
        case 1: str = one; break;
        case 2: str = two; break;
        case 3: str = three; break;
    }
    return str;
}

static void comparison(String a, String b)
{
    int result = a.compareTo(b);
    switch (result)
    {
        case 0:    System.out.println("0");
                  System.out.println("They are exactly similar!");
                  break;
        case -32:  System.out.println("-1");
                  System.out.println("It is similar, but it differs in Capitalization");
                  break;
        case 32:   System.out.println("1");
                  System.out.println("It is similar, but it differs in Capitalization");
                  break;
        default:   System.out.println("There are no similarities");
    }
}

static String toggler(String choice)
{
    String toggled = "";
    char letter[] = choice.toCharArray();
    for (int s = 0; s < letter.length; s++)
    { //There is a difference of 32(dec) between a Capital letter and its lower case
        if (letter[s] >= 'A' && 'Z' >= letter[s])
        { //if 'A' = 65, then 'a' is = 97 so adding 32 converts it to lower case
            letter[s] = (char)((int)letter[s]+32);
        }
        else if (letter[s] >= 'a' && 'z' >= letter[s])
        { //if 'a' = 97, then subtracting 32 will make it 65 which has the char value of 'A'
            letter[s] = (char)((int)letter[s]-32);
        }
        toggled += letter[s];
    }
    return toggled;
}

static void end()
{
    System.out.println("\n\t\tThank You po for Using my Program\n"
        + "\t\t\t-Vem Aiensi ^_^");
}
}

```

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### Output:

```
2nd Sem - CCC122-18/src/introduction/BSCS2_Marasigan_IntroductionB.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help

BSCS2_Marasigan_IntroductionA.java BSCS2_Marasigan_IntroductionB.java X
1 package introduction;
2 import java.util.*;
3 public class BSCS2_Marasigan_IntroductionB

Console X
BSCS2_Marasigan_IntroductionB [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (10 Feb 2022, 12:12:43 pm)
INPUT STRING 1: New Era
INPUT STRING 2: University

OPTIONS:
1. String Copy
2. String concatenation
3. String Comparison
4. Reverse a string input
5. Convert a string input (uppercase to lowercase & lowercase to upper case)
6. Toggle a string
7. Exit

Enter option [1..7]: 1
What String do you want to copy?
Please type String no. [1,2]: 2
String 3 is: University

Want to try other options? [Y/N]: y

OPTIONS:
1. String Copy
2. String concatenation
3. String Comparison
4. Reverse a string input
5. Convert a string input (uppercase to lowercase & lowercase to upper case)
6. Toggle a string
7. Exit

Enter option [1..7]: 2
What String do you want to concatenate?
Please type two String nos. [1,2,3]: 1 3
New EraUniversity

Want to try other options? [Y/N]:

2nd Sem - CCC122-18/src/introduction/BSCS2_Marasigan_IntroductionB.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help

BSCS2_Marasigan_IntroductionA.java BSCS2_Marasigan_IntroductionB.java X
1 package introduction;
2 import java.util.*;
3 public class BSCS2_Marasigan_IntroductionB

Console X
BSCS2_Marasigan_IntroductionB [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (10 Feb 2022, 12:12:43 pm)
What String do you want to concatenate?
Please type two String nos. [1,2,3]: 1 3
New EraUniversity

Want to try other options? [Y/N]: y

OPTIONS:
1. String Copy
2. String concatenation
3. String Comparison
4. Reverse a string input
5. Convert a string input (uppercase to lowercase & lowercase to upper case)
6. Toggle a string
7. Exit

Enter option [1..7]: 2
What String do you want to concatenate?
Please type two String nos. [1,2,3]: 2 3
UniversityUniversity

Want to try other options? [Y/N]: y

OPTIONS:
1. String Copy
2. String concatenation
3. String Comparison
4. Reverse a string input
5. Convert a string input (uppercase to lowercase & lowercase to upper case)
6. Toggle a string
7. Exit

Enter option [1..7]: 2
What String do you want to concatenate?
Please type two String nos. [1,2,3]: 3 1
UniversityNew Era
```

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```
2nd Sem - CCC122-18/src/introduction/BSCS2_Marasigan_IntroductionB.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
BSCS2_Marasigan_IntroductionA.java BSCS2_Marasigan_IntroductionB.java
1 package introduction;
2 import java.util.*;
3 public class BSCS2_Marasigan_IntroductionB

BSCS2_Marasigan_IntroductionB [Java Application] C:\Program Files\Java\jdk-17\bin\java.exe (10 Feb 2022, 12:12:43 pm)
INPUT STRING 1: New Era
INPUT STRING 2: new era

OPTIONS:
1. String Copy
2. String concatenation
3. String Comparison
4. Reverse a string input
5. Convert a string input (uppercase to lowercase & lowercase to upper case)
6. Toggle a string
7. Exit

Enter option [1..7]: 3
What String do you want to compare?
Please type two String nos. [1,2,3]: 1 2
1
It is similar, but it differs in Capitalization

Want to try other options? [Y/N]: Y

OPTIONS:
1. String Copy
2. String concatenation
3. String Comparison
4. Reverse a string input
5. Convert a string input (uppercase to lowercase & lowercase to upper case)
6. Toggle a string
7. Exit

Enter option [1..7]: 3
What String do you want to compare?
Please type two String nos. [1,2,3]: 1 2
1
It is similar, but it differs in Capitalization

Want to try other options? [Y/N]:
```

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Video: [https://drive.google.com/file/d/17Krq3tSEzd8RagEqlQWinlR\\_UbLHKRvI/view?usp=sharing](https://drive.google.com/file/d/17Krq3tSEzd8RagEqlQWinlR_UbLHKRvI/view?usp=sharing)

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```
2nd Sem - CCC122-18/src/introduction/BSCS2_Marasigan_IntroductionB.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help

BSCS2_Marasigan_IntroductionA.java BSCS2_Marasigan_IntroductionB.java
1 package introduction;
2 import java.util.*;
3 public class BSCS2_Marasigan_IntroductionB

Console
BSCS2_Marasigan_IntroductionB [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (10 Feb 2022, 12:12:43 pm)
INPUT STRING 1: New Era
INPUT STRING 2: new era

OPTIONS:
1. String Copy
2. String concatenation
3. String Comparison
4. Reverse a string input
5. Convert a string input (uppercase to lowercase & lowercase to upper case)
6. Toggle a string
7. Exit

Enter option [1..7]: 3
What String do you want to compare?
Please type two String nos. [1,2,3]: 2 1
1
It is similar, but it differs in Capitalization

Want to try other options? [Y/N]: Y

OPTIONS:
1. String Copy
2. String concatenation
3. String Comparison
4. Reverse a string input
5. Convert a string input (uppercase to lowercase & lowercase to upper case)
6. Toggle a string
7. Exit

Enter option [1..7]: 3
What String do you want to compare?
Please type two String nos. [1,2,3]: 1 2
1-1
It is similar, but it differs in Capitalization

Want to try other options? [Y/N]:

BSCS2_Marasigan_IntroductionB [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (10 Feb 2022, 12:12:43 pm)
Want to try other String input? [Y/N]: y

INPUT STRING 1: Hey You!
INPUT STRING 2: Hoy You!

OPTIONS:
1. String Copy
2. String concatenation
3. String Comparison
4. Reverse a string input
5. Convert a string input (uppercase to lowercase & lowercase to upper case)
6. Toggle a string
7. Exit

Enter option [1..7]: 3
What String do you want to compare?
Please type two String nos. [1,2,3]: 2 1
There are no similarities

Want to try other options? [Y/N]: y

OPTIONS:
1. String Copy
2. String concatenation
3. String Comparison
4. Reverse a string input
5. Convert a string input (uppercase to lowercase & lowercase to upper case)
6. Toggle a string
7. Exit

Enter option [1..7]: 3
What String do you want to compare?
Please type two String nos. [1,2,3]: 1 2
There are no similarities

Want to try other options? [Y/N]:
```

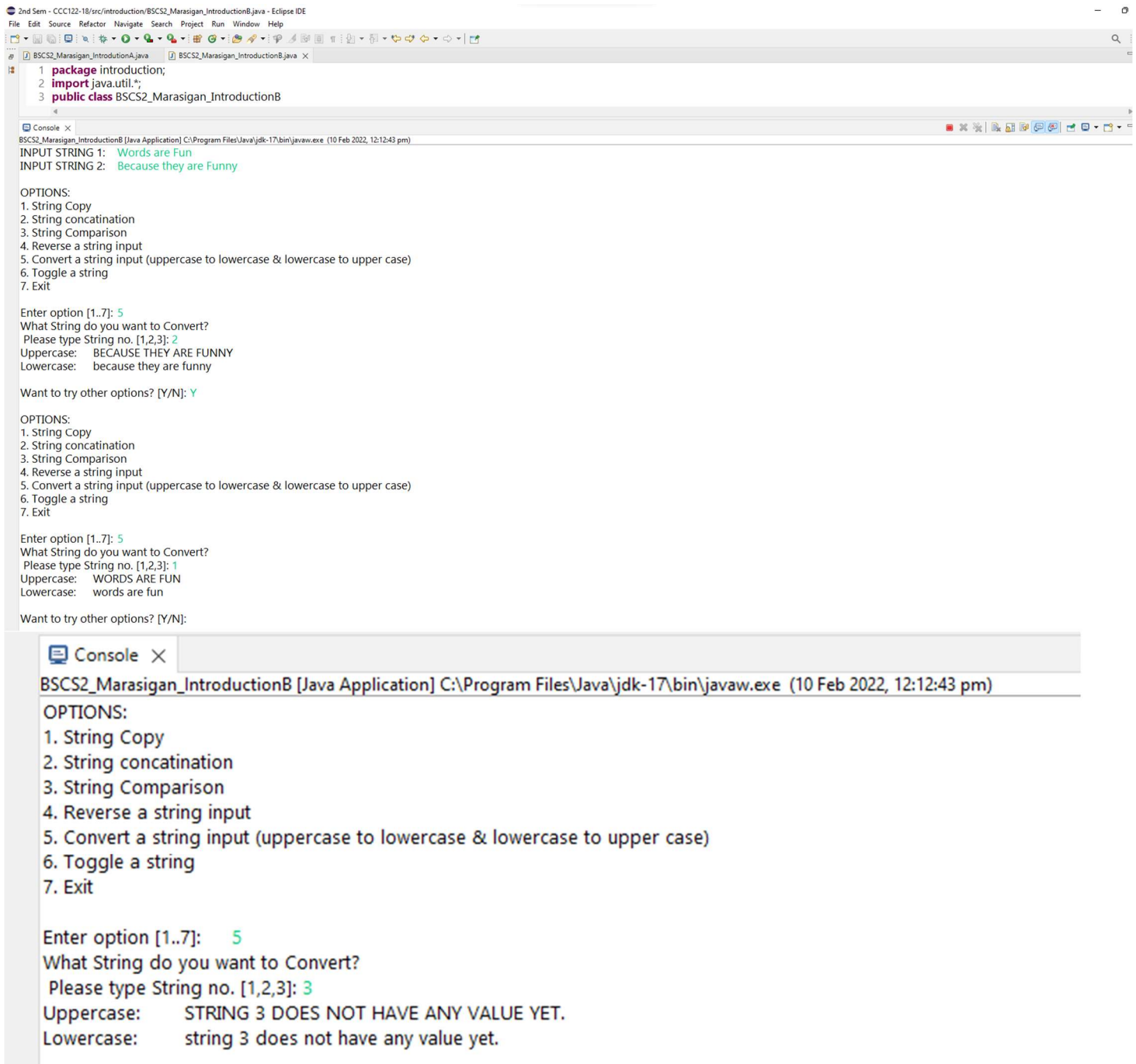
GDRIVE: <https://drive.google.com/drive/folders/1txtKDEpaUgWstM6bZ4I7ZoXGq8buQbcG?usp=sharing>

Video: [https://drive.google.com/file/d/17Kr3tSEzd8RagEqlQWinlR\\_UbLHKRvI/view?usp=sharing](https://drive.google.com/file/d/17Kr3tSEzd8RagEqlQWinlR_UbLHKRvI/view?usp=sharing)

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The screenshot displays the Eclipse IDE interface. The top editor shows the source code for `BSCS2_Marasigan_IntroductionB.java`, which includes a package declaration, an import statement for `java.util.*`, and a public class `BSCS2_Marasigan_IntroductionB`. Below the editor, the console window shows the execution of the application. It prompts for two input strings: "Words are Fun" and "Because they are Funny". It then presents a menu of options for string manipulation. The user selects option 5 (Convert a string input) and provides the string number 2. The application outputs the uppercase and lowercase versions of the second string. The console window is then scrolled down to show the next iteration of the menu, where the user selects option 5 again and provides the string number 3. The application outputs a message indicating that string 3 does not have any value yet.

```
2nd Sem - CCC122-18/src/introduction/BSCS2_Marasigan_IntroductionB.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help

BSCS2_Marasigan_IntroductionA.java BSCS2_Marasigan_IntroductionB.java
1 package introduction;
2 import java.util.*;
3 public class BSCS2_Marasigan_IntroductionB

Console
BSCS2_Marasigan_IntroductionB [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (10 Feb 2022, 12:12:43 pm)
INPUT STRING 1: Words are Fun
INPUT STRING 2: Because they are Funny

OPTIONS:
1. String Copy
2. String concatenation
3. String Comparison
4. Reverse a string input
5. Convert a string input (uppercase to lowercase & lowercase to upper case)
6. Toggle a string
7. Exit

Enter option [1..7]: 5
What String do you want to Convert?
Please type String no. [1,2,3]: 2
Uppercase: BECAUSE THEY ARE FUNNY
Lowercase: because they are funny

Want to try other options? [Y/N]: Y

OPTIONS:
1. String Copy
2. String concatenation
3. String Comparison
4. Reverse a string input
5. Convert a string input (uppercase to lowercase & lowercase to upper case)
6. Toggle a string
7. Exit

Enter option [1..7]: 5
What String do you want to Convert?
Please type String no. [1,2,3]: 1
Uppercase: WORDS ARE FUN
Lowercase: words are fun

Want to try other options? [Y/N]:

BSCS2_Marasigan_IntroductionB [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (10 Feb 2022, 12:12:43 pm)
OPTIONS:
1. String Copy
2. String concatenation
3. String Comparison
4. Reverse a string input
5. Convert a string input (uppercase to lowercase & lowercase to upper case)
6. Toggle a string
7. Exit

Enter option [1..7]: 5
What String do you want to Convert?
Please type String no. [1,2,3]: 3
Uppercase: STRING 3 DOES NOT HAVE ANY VALUE YET.
Lowercase: string 3 does not have any value yet.
```

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Video: [https://drive.google.com/file/d/17Krq3tSEzd8RagEqIQWinLR\\_UbLHKRvI/view?usp=sharing](https://drive.google.com/file/d/17Krq3tSEzd8RagEqIQWinLR_UbLHKRvI/view?usp=sharing)



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Uppercase:     STRING 3 DOES NOT HAVE ANY VALUE YET.  
Lowercase:     string 3 does not have any value yet.

Want to try other options? [Y/N]:y

OPTIONS:

1. String Copy
2. String concatenation
3. String Comparison
4. Reverse a string input
5. Convert a string input (uppercase to lowercase & lowercase to upper case)
6. Toggle a string
7. Exit

Enter option [1..7]:    1

What String do you want to copy?

  Please type String no. [1,2]: 1

String 3 is: Words are Fun

Want to try other options? [Y/N]:y

OPTIONS:

1. String Copy
2. String concatenation
3. String Comparison
4. Reverse a string input
5. Convert a string input (uppercase to lowercase & lowercase to upper case)
6. Toggle a string
7. Exit

Enter option [1..7]:    5

What String do you want to Convert?

  Please type String no. [1,2,3]: 3

Uppercase:     WORDS ARE FUN

Lowercase:     words are fun

GDRIVE: <https://drive.google.com/drive/folders/1txtKDEpaUgWstM6bZ4I7ZoXGq8buQbcG?usp=sharing>

Video: [https://drive.google.com/file/d/17KrQ3tSEzd8RagEqIQWinIR\\_UbLHKRvI/view?usp=sharing](https://drive.google.com/file/d/17KrQ3tSEzd8RagEqIQWinIR_UbLHKRvI/view?usp=sharing)



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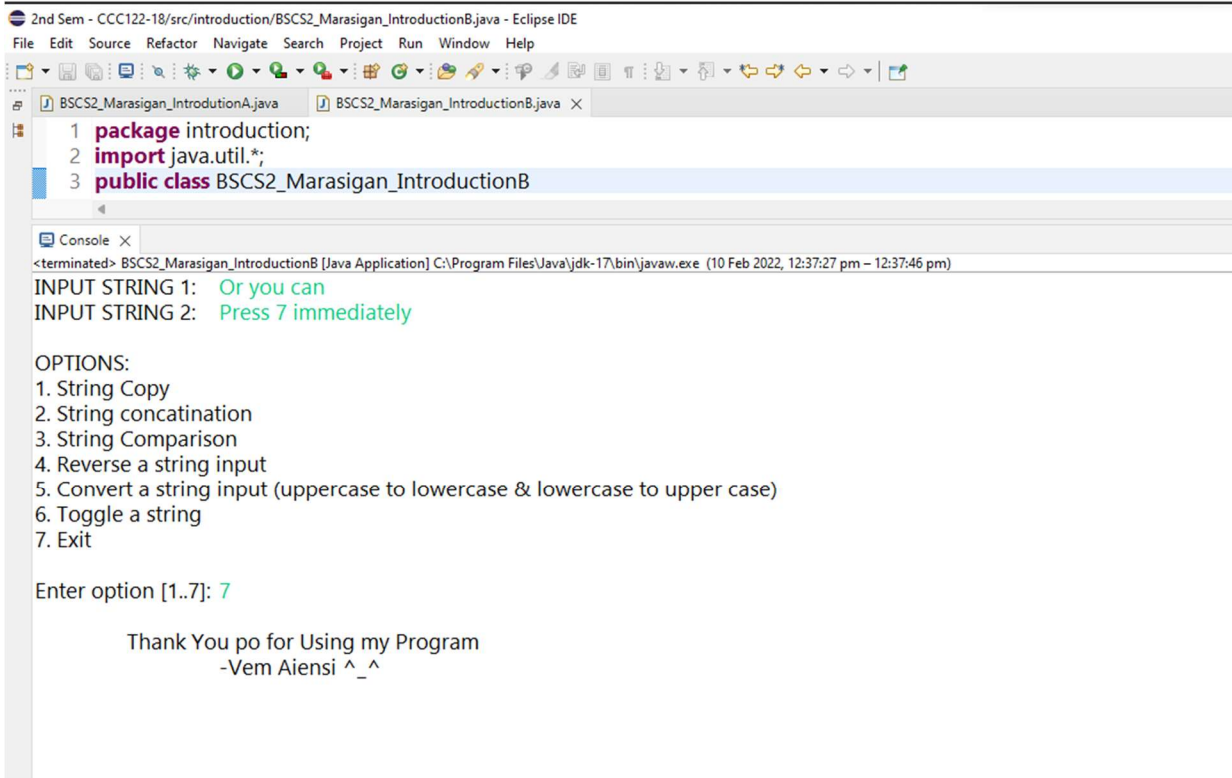
```
INPUT STRING 1:  Two Ways of Exit
INPUT STRING 2:  in this Program

OPTIONS:
1. String Copy
2. String concatenation
3. String Comparison
4. Reverse a string input
5. Convert a string input (uppercase to lowercase & lowercase to upper case)
6. Toggle a string
7. Exit

Enter option [1..7]: 1
What String do you want to copy?
Please type String no. [1,2]: 2
String 3 is: in this Program

Want to try other options? [Y/N]: n
Want to try other String input? [Y/N]: n
|

Thank You po for Using my Program
-Vem Aiensi ^_^
```



The screenshot shows the Eclipse IDE interface. The top menu bar includes File, Edit, Source, Refactor, Navigate, Search, Project, Run, Window, and Help. Below the menu is a toolbar with various icons. The project explorer on the left shows two files: BSCS2\_Marasigan\_IntroductionA.java and BSCS2\_Marasigan\_IntroductionB.java. The editor window displays the code for BSCS2\_Marasigan\_IntroductionB.java, which includes package, import, and class declarations. The console window at the bottom shows the execution output, which matches the text in the first block, including the input strings, options menu, user selections, and the final thank you message.

```
2nd Sem - CCC122-18/src/introduction/BSCS2_Marasigan_IntroductionB.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help

BSCS2_Marasigan_IntroductionA.java BSCS2_Marasigan_IntroductionB.java X
1 package introduction;
2 import java.util.*;
3 public class BSCS2_Marasigan_IntroductionB

Console X
<terminated> BSCS2_Marasigan_IntroductionB [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (10 Feb 2022, 12:37:27 pm - 12:37:46 pm)
INPUT STRING 1:  Or you can
INPUT STRING 2:  Press 7 immediately

OPTIONS:
1. String Copy
2. String concatenation
3. String Comparison
4. Reverse a string input
5. Convert a string input (uppercase to lowercase & lowercase to upper case)
6. Toggle a string
7. Exit

Enter option [1..7]: 7

Thank You po for Using my Program
-Vem Aiensi ^_^
```