

CSA 0976 Programming in Java

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Assignment 5

1.Code:

```
import java.applet.Applet;
import java.awt.*;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.awt.event.WindowAdapter;
import java.awt.event.WindowEvent;
public class EventHandleringApplet extends Applet implements ActionListener
{
    Button button;
    String message;
    public void init()
    {
        button = new Button("Click me!");
        add(button);
        button.addActionListener(this);
        message = "";
    }
    public void actionPerformed(ActionEvent event)
    {
        if (event.getSource() == button)
        {
            message = "Hello, world!";
        }
    }
}
```



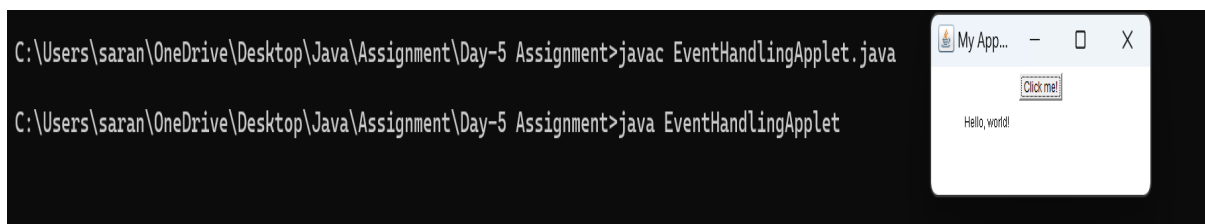
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```

        repaint();
    }
    public void paint(Graphics g)
    {
        g.drawString(message, 50, 50);
    }
    public static void main(String[] args)
    {
        EventHandlerApplet applet = new EventHandlerApplet();
        applet.init();
        Frame frame = new Frame("My Applet");
        frame.add(applet);
        frame.pack();
        frame.addWindowListener(new WindowAdapter()
        {
            public void windowClosing(WindowEvent event)
            {
                System.exit(0);
            }
        });
        frame.setVisible(true);
    }
}

```

Output:



The screenshot shows a terminal window on the left with the following commands and output:

```

C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-5 Assignment>javac EventHandlerApplet.java
C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-5 Assignment>java EventHandlerApplet

```

On the right, there is a small Java applet window titled "My Applet". It contains a button labeled "Click me!" and the text "Hello, world!" below it.



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2.Code:

```
import java.io.*;
class FileIOExample
{
    public static void main(String args[])
    {
        try
        {
            FileOutputStream fos = new FileOutputStream("output.txt");
            String message = "WELCOME TO SSE";
            fos.write(message.getBytes());
            fos.close();
            FileInputStream fis = new FileInputStream("output.txt");
            byte[] bytes = new byte[fis.available()];
            fis.read(bytes);
            fis.close();
            String readMessage = new String(bytes);
            System.out.println(readMessage);
        }
        catch (IOException e)
        {
            System.out.println("Error: " + e.getMessage());
        }
    }
}
```

Output:

```
C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-5 Assignment>javac fileop.java
C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-5 Assignment>java FileIOExample
WELCOME TO SSE
```



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3.Code:

```
import java.util.Scanner;

class captialuse
{
    public static void main(String[] args)
    {
        Scanner scan = new Scanner(System.in);
        System.out.print("Enter a word: ");
        String word = scan.nextLine();
        boolean isRightUsage = true;
        boolean allCaps = true;
        boolean noCaps = true;
        for (int i = 0; i < word.length(); i++)
        {
            char c = word.charAt(i);
            if (Character.isLowerCase(c))
            {
                allCaps = false;
            }

            else
            {
                noCaps = false;
            }
        }
        if (!allCaps && !noCaps)
        {
            isRightUsage = false;
            break;
        }
    }
}
```



```

        if (isRightUsage || allCaps || noCaps)
        {
            System.out.println("The usage of capitals in \"" + word + "\" is
correct.");
        }

        else
        {
            System.out.println("The usage of capitals in \"" + word + "\" is
incorrect.");
        }
    }
}

```

Output:

```

C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-5 Assignment>javac captialuse.java

C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-5 Assignment>java captialuse
Enter a word: USA
The usage of capitals in "USA" is correct.

C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-5 Assignment>java captialuse
Enter a word: Good
The usage of capitals in "Good" is incorrect.

```

4.Code:

```

import java.util.Arrays;

class upperch
{
    public static char nextGreatestLetter(char[] letters, char target)
    {
        int n = letters.length;
        int left = 0, right = n - 1;
        while (left <= right)
        {
            int mid = left + (right - left) / 2;

```



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```

        if (letters[mid] <= target)
        {
            left = mid + 1;
        }

        else
        {
            right = mid - 1;
        }
    }

    return left >= n ? letters[0] : letters[left];
}

public static void main(String[] args)
{
    char[] letters = {'c', 'f', 'j'};
    char target = 'a';
    char result = nextGreatestLetter(letters, target);

    System.out.println("Input: letters = " + Arrays.toString(letters) + ", target
= " + target);

    System.out.println("Output: " + result);
}
}

```

Output:

```

C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-5 Assignment>javac upperch.java

C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-5 Assignment>java upperch
Input: letters = [c, f, j], target = a
Output: c

```

5.Code:

```

import java.util.Scanner;

public class Menusel
{

```



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```

public static void main(String[] args)
{
Scanner scan = new Scanner(System.in);
char choice;
do
{
System.out.println("Help on : ");
System.out.println("1. if");
System.out.println("2. switch");
System.out.println("3. while");
System.out.println("4. do-while");
System.out.println("5. for\n");
System.out.print("Choose any one : ");
choice = scan.next().charAt(0);
} while(choice < '1' || choice > '5');
System.out.println("\n");
switch (choice)
{
case '1':
System.out.println("The if :\n");
System.out.println("if(condition)\n{\n\tstatement\n}");
System.out.println("else\n{\n\tstatement\n}");
break;
case '2':
System.out.println("The switch :\n");
System.out.println("switch(expression)\n{");
System.out.println("\tcase constant: statement
sequence\n\tbreak;");
System.out.println("\t\t...\n}");

```



```

        break;
    case '3':
        System.out.println("The while :\n");
        System.out.println("while(condition)\n{");
        System.out.println("\t// body of loop\n");
        break;
    case '4':
        System.out.println("The do-while :\n");
        System.out.println("do\n{");
        System.out.println("\t// body of loop\n\n}while(condition);");
        break;
    case '5':
        System.out.println("The for :\n");
        System.out.println("for(initialization; condition; iteration)\n{");
        System.out.println("\t// body of loop\n");
        break;
    default:
        System.out.println("Invalid choice!");
    }
}
}

```



Output:

```
C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-5 Assignment>javac Menusel.java

C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-5 Assignment>java Menusel
Help on :
1. if
2. switch
3. while
4. do-while
5. for

Choose any one : 1

The if :

if(condition)
{
    statement
}
else
{
    statement
}
```

