



**ims noida**

INSTITUTE OF MANAGEMENT STUDIES  
Recognised by UGC & Affiliated to CCS University, Meerut  
GRADE 'A' INSTITUTE BY UGC-NAAC

## **School of IT**

### **Institute of Management Studies - Noida**



**BCA-(2023-2024)**

**Submitted to:** Anushrav Mudgal

**Submitted by:** Pranjal Gupta

**Roll No :** 230919000306

**Answer 1:**

```
Class Student {  
String name;  
Int rollNo;  
Student(String name, int rollNo)  
{  
This.name = name;  
This.rollNo = rollNo;  
}  
Void display() {  
System.out.println("Name: " + name + ", Roll No: " + rollNo);  
}  
}  
Class BCASStudent extends Student {  
Int semester;  
BCASStudent(String name, int rollNo, int semester) {  
Super(name, rollNo);  
This.semester = semester;  
}  
Void display() {  
System.out.println("Name: " + name + ", Roll No: " + rollNo + ", Semester: "  
+ semester);  
}  
}  
Public class Main {  
Public static void main(String[] args) {
```

```
BCAStudent[] students = new BCAStudent[3];
Students[0] = new BCAStudent("Pranjal", 45, 1);
Students[1] = new BCAStudent("Naval", 32, 2);
Students[2] = new BCAStudent("Joy", 21, 3);
System.out.println("BCA Student Details:");
For (int i = 0; i < students.length; i++) {
    Students[i].display();
}
Try {
    System.out.println("\nTrying to access invalid index...");
    System.out.println(students[5].name); // This will cause
    ArrayIndexOutOfBoundsException
}
Catch (ArrayIndexOutOfBoundsException e) {
    System.out.println("Exception caught: " + e);
}
Catch (NumberFormatException e) {
    System.out.println("Number format error: " + e);
}
System.out.println("\nProgram executed successfully!");
}
}
```

### **Output :**

```
BCA Student Details:
Name: Pranjali, Roll No: 45, Semester: 1
Name: Naval, Roll No: 32, Semester: 2
Name: Joy, Roll No: 21, Semester: 3

Trying to access invalid index...
Exception caught: java.lang.ArrayIndexOutOfBoundsException: Index 5 out of
    bounds for length 3

Program executed successfully!

=== Code Execution Successful ===
```

### **Answer 2**

**Import java.awt.\*;**

**Import java.awt.event.\*;**

**Class AWTEExampleJoy extends Frame implements ActionListener {**


**Label label;**

**TextField textField;**

**Button button;**

```
AWTExampleJoy() {  
    // Set layout manager  
    setLayout(new FlowLayout());  
  
    label = new Label("Enter your name:");  
    textField = new TextField(20);  
    button = new Button("Click Me");  
  
    add(label);  
    add(textField);  
    add(button);  
  
    button.addActionListener(this);  
  
    setTitle("AWT Example – Joy");  
    setSize(300, 150);  
    setVisible(true);  
  
    // Add window listener for closing window  
    addWindowListener(new WindowAdapter() {  
        public void windowClosing(WindowEvent e) {  
            System.exit(0);  
        }  
    });  
}
```

```
Public void actionPerformed(ActionEvent e) {  
    String name = textField.getText();  
  
    If (name.isEmpty()) {  
        Name = "pranjal"; // Default name if nothing entered  
    }  
  
    System.out.println("Hello, " + name + "!");  
}  
  
Public static void main(String[] args) {  
    New AWTEExampleJoy();  
}  
}
```

 Output (in console)

Hello, Pranjal!

**Answer 3**

**Import java.io.\*;**

**Import**

**Java.net.\*;**

```

Public class TCPServer {
    Public static void
    Main(String[] args) throws
    IOException { ServerSocket
    welcomeSocket = new
    ServerSocket(9876);
    While (true) {
    Socket connectionSocket =
    welcomeSocket.accept();
    BufferedReader
    inFromClient = new
    BufferedReader(new
    InputStreamReader(connectionSocket.getInputStream()));
    DataOutputStream outToClient = new
    DataOutputStream(connectionSocket.getOutputStream());
    String clientSentence =
    inFromClient.readLine();
    System.out.println("Receiv
    Ed: " + clientSentence);
    String capitalizedSentence =
    clientSentence.toUpperCase() + '\n';
    outToClient.writeBytes(capitalizedS
    entence);
    }
    }
    }

```

**TCPClient.jav**

**A Import**

**Java.io\*; Import**

**Java.net.\*;**

**Socket connectionSocket =**

**welcomeSocket.accept();**

**BufferedReader**

**inFromClient = new**

**BufferedReader(new**

**InputStreamReader(connectionSocket.getInputStream()));**

**DataOutputStream outToClient = new**

**DataOutputStream(connectionSocket.getOutputStream());**

**String clientSentence =**

**inFromClient.readLine();**

**System.out.println("Receiv**

**Ed: " + clientSentence);**

**String capitalizedSentence =**

**clientSentence.toUpperCase() + '\n';**

**outToClient.writeBytes(capitalizedS**

**entence);**

**}**

**}**

**}**

**TCPClient.jav**

**A Import**

**Java.io\*; Import**



```

Java.net.*;

}

JdbcInsert.java

Import java.sql.Connection;

Import java.sql.DriverManager;

Import

Java.sql.PreparedStatement;

Import java.sql.SQLException;

Public class JdbcInsert {

Public static void main(String[] args)

{ String url =

“jdbc:mysql://localhost:3

306/javatestdb”; String

User = “root”;

String password = “Pranjal”;

Connecti

On con =

Null;

Prepared

Statemen

T pstmt =

Null;

Try {

Class.forName(“com.mysql.cj.jdbc.Driver”);

Con =

DriverManager.getConne

```

```

Connection(url, user, password);

System.out.println("Con
nection Successful");

String sql = "INSERT INTO students
(roll_number, student_name) VALUES
(?, ?)"; pstmt =
Con.prepareStatement(sql);

Pstmt.setI
nt(1,
12345);

Pstmt.set
String(2,
"Pranjal");

Int
rowsAffected =
pstmt.executeUpdate(); if
(rowsAffected
    > 0) {

System.out.println("Record Inserted");
}
} catch
(ClassNotFoundE
xception e)
{
System.err.print

```

```

Ln("JDBC Driver
Not found.");
} catch (SQLException e) {
System.err.println("SQL Error occurred: " + e.getMessage());
} finally { try {
If
(pstmt !
= null)
Pstmt.cl
Ose(); if
(con !=
Null)
Con.clos
E();
} catch
(SQL
Excep
Tion e)
{ e.pri
ntStac
kTrac
e();
}
}
}
}

```

```

Ln("JDBC Driver
Not found.");
} catch (SQLException e) {
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(pstmt !
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Null)
Con.clos
E();
} catch
(SQL
Excep
Tion e)
{ e.pri
ntStac
kTrac
e();
}
}
}
}

```

#### Answer 4

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>Pranjal Gupta – Profile</title>

</head>

<body style="font-family: Arial, sans-serif; background-color: #f4f6f8; margin: 40px;">


  <h1 style="color: #2c3e50;">Pranjal Gupta</h1>

  <p><b>Student ID:</b> <code>230919000306</code></p>


  <hr>


  <h2>About Me</h2>

  <p>

    Hello! My name is <b>Pranjal Gupta</b>, and I'm a passionate <i>Computer Science student</i> currently studying at IMS Noida.<br>

    I enjoy learning about software development, algorithms, and web technologies.

  </p>


  <hr>


  <h2>My College</h2>

  <div style="text-align:center;">
```

``

`</div>`

`<p>I am proud to be a student of <b>IMS Noida</b>, striving for excellence and innovation.</p>`

`<hr>`

`<h2>My Subjects</h2>`

`<table border="1" cellpadding="8" cellspacing="0" style="border-collapse: collapse;">`

`<tr style="background-color: #dfe6e9;">`

`<th>Subject Code</th>`

`<th>Subject Name</th>`

`</tr>`

`<tr>`

`<td>CS201</td>`

`<td>Java Programming and Dynamic Webpage Design</td>`

`</tr>`

`<tr>`

`<td>CS202</td>`

`<td>Data Structures and Algorithms</td>`

`</tr>`

`<tr>`

`<td>CS203</td>`

`<td>Database Management Systems</td>`

`</tr>`

```
<tr>

  <td>CS204</td>

  <td>Operating Systems</td>

</tr>

<tr>

  <td>CS205</td>

  <td>Computer Network</td>

</tr>
</table>
```

```
<hr>
```

```
<h2>Feedback Form</h2>
```

```
<form>
```

```
  <label for="username">Username: </label>
```

```
  <input type="text" id="username" name="username" placeholder="Enter your
name">
```

```
  <input type="submit" value="Submit">
```

```
</form>
```

```
<hr>
```

```
<h2>My GitHub Repository</h2>
```

```
<p>
```

```
  Check out my project on GitHub:
```

```
  <a href="https://github.com/pranjalgupta" target="_blank">Pranjal's GitHub
Repository</a>
```

</p>

<hr>

<p style="text-align:center;">&copy; 2025 Pranjal Gupta. All Rights Reserved.</p>

</body>

</html>

## Pranjal Gupta

Student ID: 2300150000206


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### About Me

Hello! My name is Pranjal Gupta, and I'm a passionate Computer Science student currently studying at IMS Noida. I enjoy learning about software development, algorithms, and web technologies.

---

### My College



ESTABLISHED 1998

I am proud to be a student of IMS Noida, striving for excellence and innovation.

---

### My Subjects

Subject Code	Subject Name
CS201	Java Programming and Dynamic Webpage Design
CS202	Data Structures and Algorithms
CS203	Database Management Systems
CS204	Operating Systems
CS205	Computer Network

---

### Feedback Form

Activate Windows

Go to Settings to activate Windows.