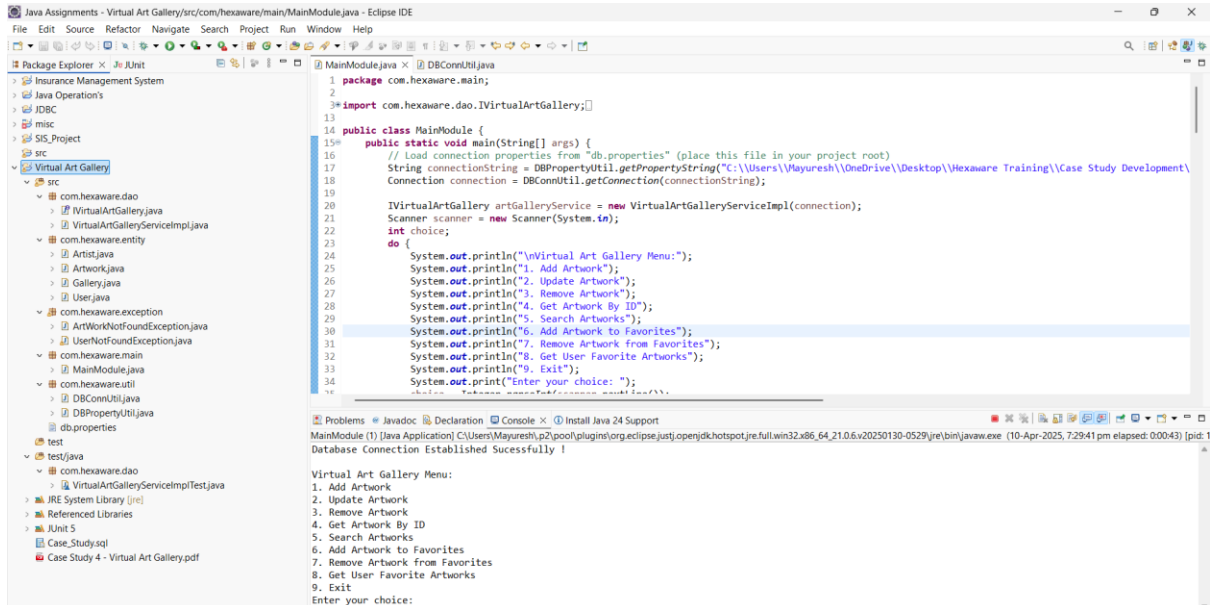


# Virtual Art Gallery

## Output Screenshot's

### 1. Output Window:

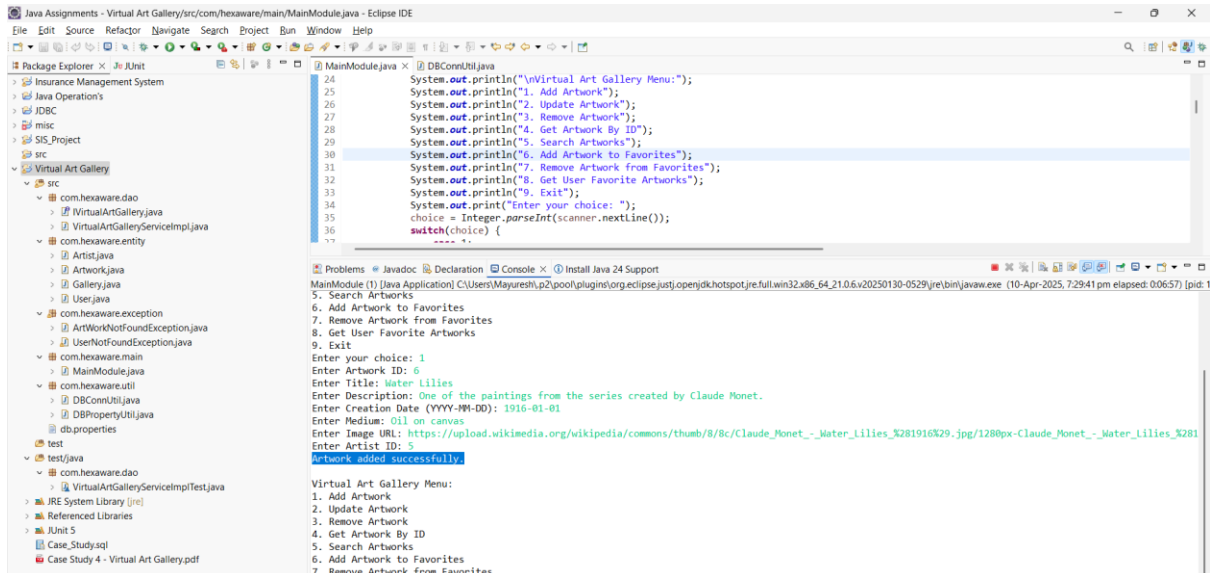


The screenshot shows the Eclipse IDE with the 'Virtual Art Gallery' project. The Package Explorer on the left shows the project structure, including the 'src' folder with files like 'MainModule.java' and 'DBConnUtil.java'. The main editor displays the code for 'MainModule.java', which is a Java class with a 'main' method. The code includes a menu with options: 1. Add Artwork, 2. Update Artwork, 3. Remove Artwork, 4. Get Artwork By ID, 5. Search Artworks, 6. Add Artwork to Favorites, 7. Remove Artwork from Favorites, 8. Get User Favorite Artworks, 9. Exit. The output window at the bottom shows the execution of the program, displaying the menu and the user's choice to add a new artwork.

```
1 package com.hexaware.main;
2
3 import com.hexaware.dao.IVirtualArtGallery;
4
5 public class MainModule {
6
7     public static void main(String[] args) {
8         // Load connection properties from "db.properties" (place this file in your project root)
9         String connectionString = DBPropertyUtil.getPropertyString("C:\\Users\\Mayuresh\\OneDrive\\Desktop\\Hexaware Training\\Case Study Development\\
10         Connection connection = DBConnUtil.getConnection(connectionString);
11
12         IVirtualArtGallery artGalleryService = new VirtualArtGalleryServiceImpl(connection);
13         Scanner scanner = new Scanner(System.in);
14         int choice;
15         do {
16             System.out.println("\nVirtual Art Gallery Menu:");
17             System.out.println("1. Add Artwork");
18             System.out.println("2. Update Artwork");
19             System.out.println("3. Remove Artwork");
20             System.out.println("4. Get Artwork By ID");
21             System.out.println("5. Search Artworks");
22             System.out.println("6. Add Artwork to Favorites");
23             System.out.println("7. Remove Artwork from Favorites");
24             System.out.println("8. Get User Favorite Artworks");
25             System.out.println("9. Exit");
26             System.out.print("Enter your choice: ");
27             choice = scanner.nextInt();
28             switch(choice) {
29                 case 1:
30                     // Add Artwork
31                     break;
32                 case 2:
33                     // Update Artwork
34                     break;
35                 case 3:
36                     // Remove Artwork
37                     break;
38                 case 4:
39                     // Get Artwork By ID
40                     break;
41                 case 5:
42                     // Search Artworks
43                     break;
44                 case 6:
45                     // Add Artwork to Favorites
46                     break;
47                 case 7:
48                     // Remove Artwork from Favorites
49                     break;
50                 case 8:
51                     // Get User Favorite Artworks
52                     break;
53                 case 9:
54                     // Exit
55                     break;
56                 default:
57                     System.out.println("Invalid choice. Please enter a valid choice from 1 to 9.");
58                     break;
59             }
60         } while (choice != 9);
61     }
62 }
```

Virtual Art Gallery Menu:  
1. Add Artwork  
2. Update Artwork  
3. Remove Artwork  
4. Get Artwork By ID  
5. Search Artworks  
6. Add Artwork to Favorites  
7. Remove Artwork from Favorites  
8. Get User Favorite Artworks  
9. Exit  
Enter your choice:

### 2. Option 1: Add New Artwork

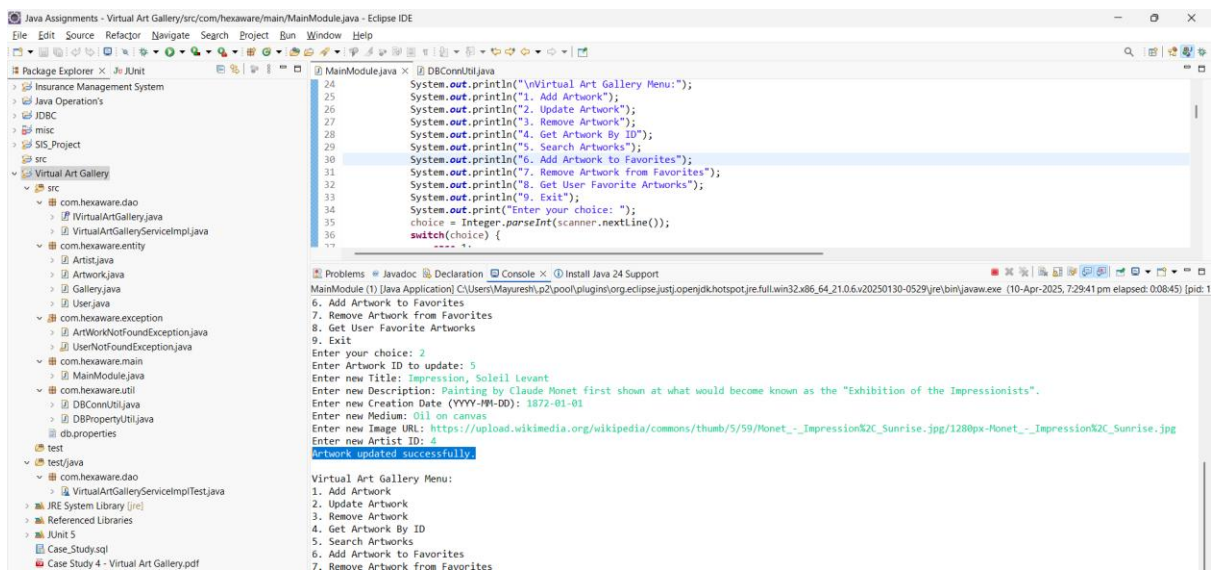


The screenshot shows the Eclipse IDE with the 'Virtual Art Gallery' project. The Package Explorer on the left shows the project structure, including the 'src' folder with files like 'MainModule.java' and 'DBConnUtil.java'. The main editor displays the code for 'MainModule.java', which is a Java class with a 'main' method. The code includes a menu with options: 1. Add Artwork, 2. Update Artwork, 3. Remove Artwork, 4. Get Artwork By ID, 5. Search Artworks, 6. Add Artwork to Favorites, 7. Remove Artwork from Favorites, 8. Get User Favorite Artworks, 9. Exit. The output window at the bottom shows the execution of the program, displaying the menu and the user's choice to add a new artwork. The user enters the title 'Water Lilies', the description 'One of the paintings from the series created by Claude Monet.', the creation date '1916-01-01', the medium 'Oil on canvas', the image URL 'https://upload.wikimedia.org/wikipedia/commons/thumb/8/8c/Claude\_Monet\_-\_Water\_Lilies\_N281916X29.jpg/1280px-Claude\_Monet\_-\_Water\_Lilies\_N281', and the artist ID '5'. The output shows 'Artwork added successfully'.

```
24 System.out.println("\nVirtual Art Gallery Menu:");
25 System.out.println("1. Add Artwork");
26 System.out.println("2. Update Artwork");
27 System.out.println("3. Remove Artwork");
28 System.out.println("4. Get Artwork By ID");
29 System.out.println("5. Search Artworks");
30 System.out.println("6. Add Artwork to Favorites");
31 System.out.println("7. Remove Artwork from Favorites");
32 System.out.println("8. Get User Favorite Artworks");
33 System.out.println("9. Exit");
34 System.out.print("Enter your choice: ");
35 choice = Integer.parseInt(scanner.nextLine());
36 switch(choice) {
37     case 1:
38         // Add Artwork
39         break;
40     case 2:
41         // Update Artwork
42         break;
43     case 3:
44         // Remove Artwork
45         break;
46     case 4:
47         // Get Artwork By ID
48         break;
49     case 5:
50         // Search Artworks
51         break;
52     case 6:
53         // Add Artwork to Favorites
54         break;
55     case 7:
56         // Remove Artwork from Favorites
57         break;
58     case 8:
59         // Get User Favorite Artworks
60         break;
61     case 9:
62         // Exit
63         break;
64     default:
65         System.out.println("Invalid choice. Please enter a valid choice from 1 to 9.");
66         break;
67 }
68 }
```

Virtual Art Gallery Menu:  
1. Add Artwork  
2. Update Artwork  
3. Remove Artwork  
4. Get Artwork By ID  
5. Search Artworks  
6. Add Artwork to Favorites  
7. Remove Artwork from Favorites  
8. Get User Favorite Artworks  
9. Exit  
Enter your choice: 1  
Enter Artwork ID: 6  
Enter Title: Water Lilies  
Enter Description: One of the paintings from the series created by Claude Monet.  
Enter Creation Date (YYYY-MM-DD): 1916-01-01  
Enter Medium: Oil on canvas  
Enter Image URL: https://upload.wikimedia.org/wikipedia/commons/thumb/8/8c/Claude\_Monet\_-\_Water\_Lilies\_N281916X29.jpg/1280px-Claude\_Monet\_-\_Water\_Lilies\_N281  
Enter Artist ID: 5  
Artwork added successfully.

### 3. Update Existing Artwork

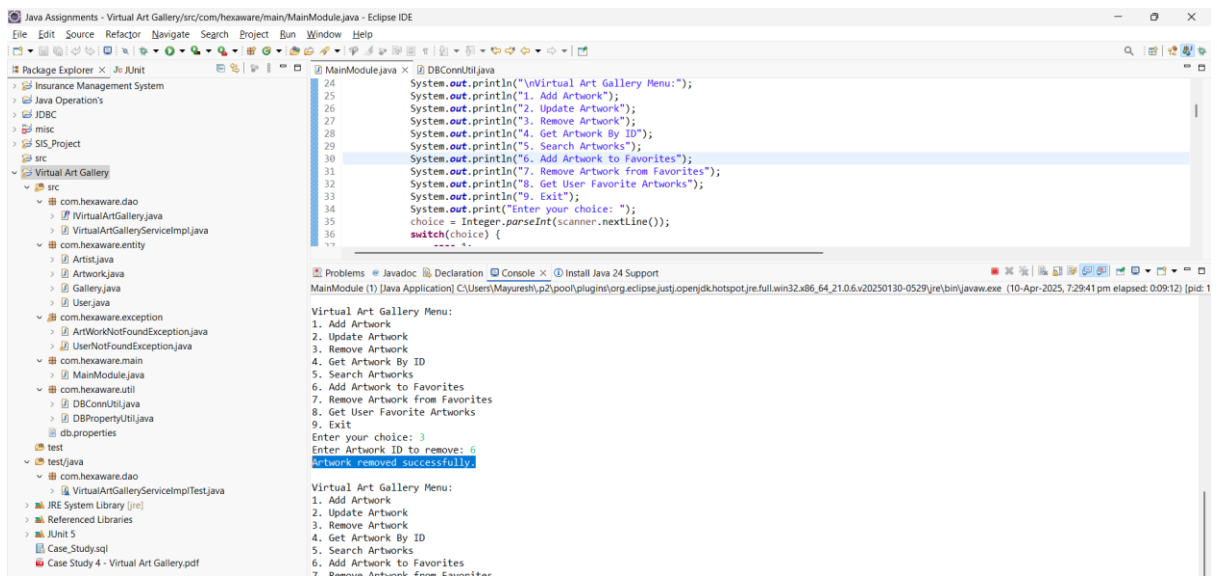


```
24      System.out.println("\nVirtual Art Gallery Menu:");
25      System.out.println("1. Add Artwork");
26      System.out.println("2. Update Artwork");
27      System.out.println("3. Remove Artwork");
28      System.out.println("4. Get Artwork By ID");
29      System.out.println("5. Search Artworks");
30      System.out.println("6. Add Artwork to Favorites");
31      System.out.println("7. Remove Artwork from Favorites");
32      System.out.println("8. Get User Favorite Artworks");
33      System.out.println("9. Exit");
34      System.out.print("Enter your choice: ");
35      choice = Integer.parseInt(scanner.nextLine());
36      switch(choice) {
37          case 1:
38              addArtwork();
39              break;
40          case 2:
41              updateArtwork();
42              break;
43          case 3:
44              removeArtwork();
45              break;
46          case 4:
47              getArtworkById();
48              break;
49          case 5:
50              searchArtworks();
51              break;
52          case 6:
53              addArtworkToFavorites();
54              break;
55          case 7:
56              removeArtworkFromFavorites();
57              break;
58          case 8:
59              getUserFavoriteArtworks();
60              break;
61          case 9:
62              exit();
63              break;
64          default:
65              System.out.println("Invalid choice. Please try again.");
66      }
67  }
68  }
69  }
70  }
71  }
```

```
MainModule (1) [Java Application] C:\Users\Mayuresh\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.21.0.6\v20250130-0529\jre\bin\javaw.exe (10-Apr-2025, 7:29:41 pm elapsed: 0:08:45) [pid: 1]
Virtual Art Gallery Menu:
1. Add Artwork
2. Update Artwork
3. Remove Artwork
4. Get Artwork By ID
5. Search Artworks
6. Add Artwork to Favorites
7. Remove Artwork from Favorites
Enter your choice: 2
Enter Artwork ID to update: 5
Enter new Title: Impression, Soleil levant
Enter new Description: Painting by Claude Monet first shown at what would become known as the "Exhibition of the Impressionists".
Enter new Creation Date (YYYY-MM-DD): 1872-01-01
Enter new Medium: Oil on canvas
Enter new Image URL: https://upload.wikimedia.org/wikipedia/commons/thumb/5/59/Monet_-_Impression%2C_Sunrise.jpg/1280px-Monet_-_Impression%2C_Sunrise.jpg
Enter new Artist ID:
Artwork updated successfully.

Virtual Art Gallery Menu:
1. Add Artwork
2. Update Artwork
3. Remove Artwork
4. Get Artwork By ID
5. Search Artworks
6. Add Artwork to Favorites
7. Remove Artwork from Favorites
```

### 4. Retrieve Artwork by ID

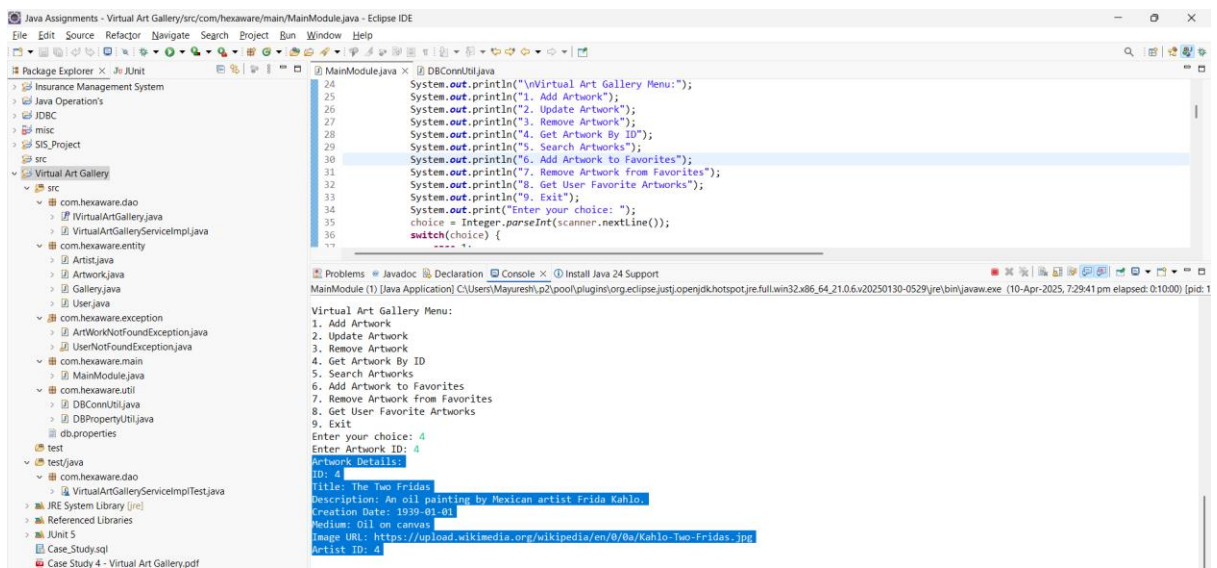


```
24      System.out.println("\nVirtual Art Gallery Menu:");
25      System.out.println("1. Add Artwork");
26      System.out.println("2. Update Artwork");
27      System.out.println("3. Remove Artwork");
28      System.out.println("4. Get Artwork By ID");
29      System.out.println("5. Search Artworks");
30      System.out.println("6. Add Artwork to Favorites");
31      System.out.println("7. Remove Artwork from Favorites");
32      System.out.println("8. Get User Favorite Artworks");
33      System.out.println("9. Exit");
34      System.out.print("Enter your choice: ");
35      choice = Integer.parseInt(scanner.nextLine());
36      switch(choice) {
37          case 1:
38              addArtwork();
39              break;
40          case 2:
41              updateArtwork();
42              break;
43          case 3:
44              removeArtwork();
45              break;
46          case 4:
47              getArtworkById();
48              break;
49          case 5:
50              searchArtworks();
51              break;
52          case 6:
53              addArtworkToFavorites();
54              break;
55          case 7:
56              removeArtworkFromFavorites();
57              break;
58          case 8:
59              getUserFavoriteArtworks();
60              break;
61          case 9:
62              exit();
63              break;
64          default:
65              System.out.println("Invalid choice. Please try again.");
66      }
67  }
68  }
69  }
70  }
71  }
```

```
MainModule (1) [Java Application] C:\Users\Mayuresh\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.21.0.6\v20250130-0529\jre\bin\javaw.exe (10-Apr-2025, 7:29:41 pm elapsed: 0:09:12) [pid: 1]
Virtual Art Gallery Menu:
1. Add Artwork
2. Update Artwork
3. Remove Artwork
4. Get Artwork By ID
5. Search Artworks
6. Add Artwork to Favorites
7. Remove Artwork from Favorites
8. Get User Favorite Artworks
9. Exit
Enter your choice: 4
Enter Artwork ID to retrieve: 6
Artwork retrieved successfully.

Virtual Art Gallery Menu:
1. Add Artwork
2. Update Artwork
3. Remove Artwork
4. Get Artwork By ID
5. Search Artworks
6. Add Artwork to Favorites
7. Remove Artwork from Favorites
```

## 5. Search for Artwork by Title & Description



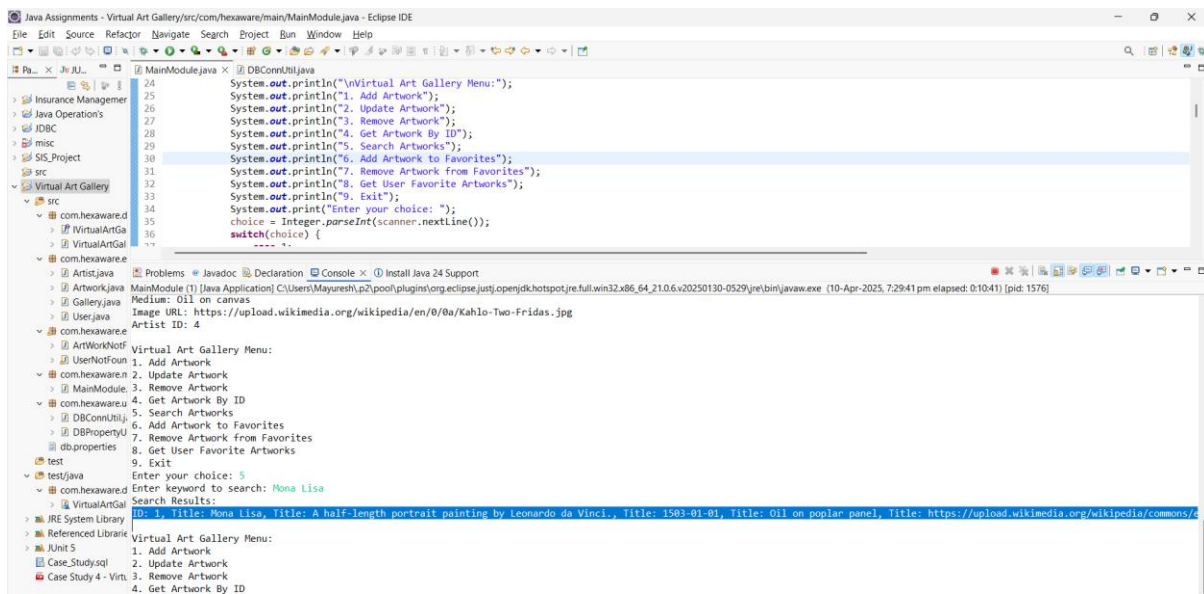
```
24      System.out.println("\nVirtual Art Gallery Menu:");
25      System.out.println("1. Add Artwork");
26      System.out.println("2. Update Artwork");
27      System.out.println("3. Remove Artwork");
28      System.out.println("4. Get Artwork By ID");
29      System.out.println("5. Search Artworks");
30      System.out.println("6. Add Artwork to Favorites");
31      System.out.println("7. Remove Artwork from Favorites");
32      System.out.println("8. Get User Favorite Artworks");
33      System.out.println("9. Exit");
34      System.out.print("Enter your choice: ");
35      choice = Integer.parseInt(scanner.nextLine());
36      switch(choice) {
37          ....
38      }
```

Virtual Art Gallery Menu:

1. Add Artwork
2. Update Artwork
3. Remove Artwork
4. Get Artwork By ID
5. Search Artworks
6. Add Artwork to Favorites
7. Remove Artwork from Favorites
8. Get User Favorite Artworks
9. Exit

Enter your choice: 4  
Enter Artwork ID: 4  
Artwork Details:  
ID: 4  
Title: The Two Fridas  
Description: An oil painting by Mexican artist Frida Kahlo.  
Creation Date: 1939-01-01  
Medium: Oil on canvas  
Image URL: <https://upload.wikimedia.org/wikipedia/en/0/0a/Kahlo-Two-Fridas.jpg>  
Artist ID: 4

## 6. Add Artwork to Favorites List



```
24      System.out.println("\nVirtual Art Gallery Menu:");
25      System.out.println("1. Add Artwork");
26      System.out.println("2. Update Artwork");
27      System.out.println("3. Remove Artwork");
28      System.out.println("4. Get Artwork By ID");
29      System.out.println("5. Search Artworks");
30      System.out.println("6. Add Artwork to Favorites");
31      System.out.println("7. Remove Artwork from Favorites");
32      System.out.println("8. Get User Favorite Artworks");
33      System.out.println("9. Exit");
34      System.out.print("Enter your choice: ");
35      choice = Integer.parseInt(scanner.nextLine());
36      switch(choice) {
37          ....
38      }
```

Virtual Art Gallery Menu:

1. Add Artwork
2. Update Artwork
3. Remove Artwork
4. Get Artwork By ID
5. Search Artworks
6. Add Artwork to Favorites
7. Remove Artwork from Favorites
8. Get User Favorite Artworks
9. Exit

Enter your choice: 6  
Enter keyword to search: Mona Lisa  
Search Results:  
ID: 1, Title: Mona Lisa, Title: A half-length portrait painting by Leonardo da Vinci., Title: 1503-01-01, Title: Oil on poplar panel, Title: [https://upload.wikimedia.org/wikipedia/commons/6/6f/Mona\\_Lisa.jpg](https://upload.wikimedia.org/wikipedia/commons/6/6f/Mona_Lisa.jpg)  
Artist ID: 1

## 7. Remove Artwork from Favorites list

The screenshot shows the Eclipse IDE with the 'Virtual Art Gallery' project. The 'MainModule.java' file is open, displaying the menu logic. The console output shows the following sequence of events:

```
Virtual Art Gallery Menu:
1. Add Artwork
2. Update Artwork
3. Remove Artwork
4. Get Artwork By ID
5. Search Artworks
6. Add Artwork to Favorites
7. Remove Artwork from Favorites
8. Get User Favorite Artworks
9. Exit
Enter your choice: 5
Enter keyword to search: Mona Lisa
Search Results:
ID: 1, Title: Mona Lisa, Title: A half-length portrait painting by Leonardo da Vinci., Title: 1503-01-01, Title: Oil on poplar panel, Title: https://upload.wikimedia.o

Virtual Art Gallery Menu:
1. Add Artwork
2. Update Artwork
3. Remove Artwork
4. Get Artwork By ID
5. Search Artworks
6. Add Artwork to Favorites
7. Remove Artwork from Favorites
8. Get User Favorite Artworks
9. Exit
Enter your choice: 6
Enter User ID: 1
Enter Artwork ID to add to favorites: 5
Artwork added to favorites
```

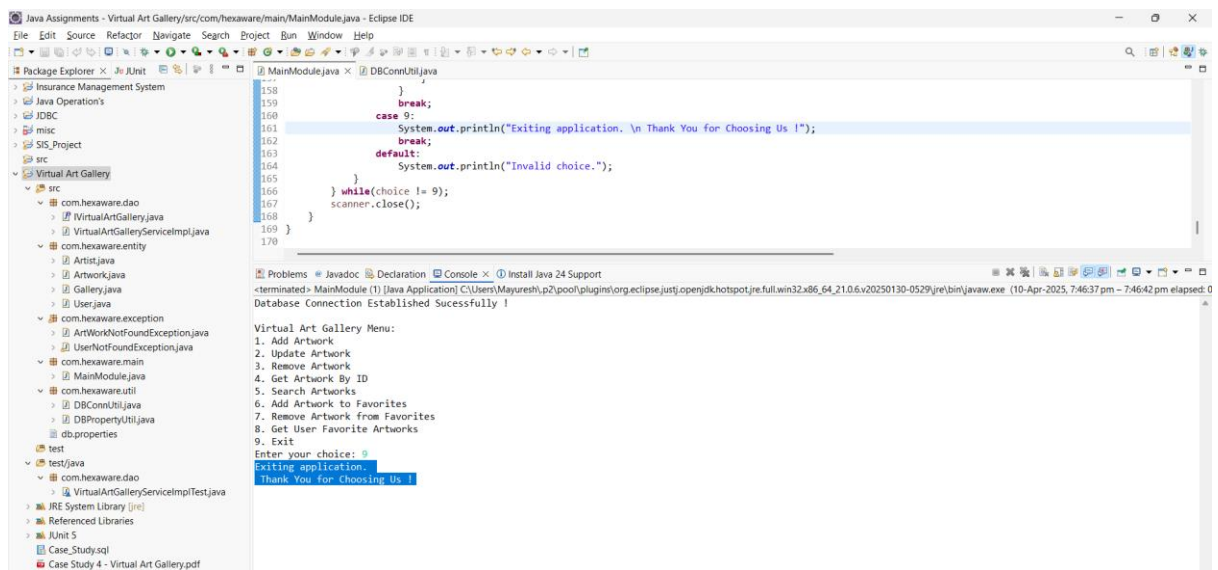
## 8. Get User from Favorites Artworks List

The screenshot shows the Eclipse IDE with the 'Virtual Art Gallery' project. The 'MainModule.java' file is open, displaying the menu logic. The console output shows the following sequence of events:

```
Virtual Art Gallery Menu:
1. Add Artwork
2. Update Artwork
3. Remove Artwork
4. Get Artwork By ID
5. Search Artworks
6. Add Artwork to Favorites
7. Remove Artwork from Favorites
8. Get User Favorite Artworks
9. Exit
Enter your choice: 7
Enter User ID: 1
Enter Artwork ID to remove from favorites: 5
Artwork removed from favorites

Virtual Art Gallery Menu:
1. Add Artwork
2. Update Artwork
3. Remove Artwork
```

## 9. Exit the Application



The screenshot shows the Eclipse IDE with the following components:

- Package Explorer:** Displays the project structure for 'Virtual Art Gallery'. The 'src' package is expanded, showing sub-packages like 'com.hexaware.dao', 'com.hexaware.main', and 'com.hexaware.util'. The 'MainModule.java' file is selected.
- Editor:** Displays the code for 'MainModule.java'. The code is a Java application that runs in a loop, prompting the user to enter a choice. The choices are: 1. Add Artwork, 2. Update Artwork, 3. Remove Artwork, 4. Get Artwork By ID, 5. Search Artworks, 6. Add Artwork to Favorites, 7. Remove Artwork from Favorites, 8. Get User Favorite Artworks, 9. Exit. The code for choice 9 is highlighted.
- Console:** Displays the output of the application. It shows the 'Virtual Art Gallery Menu' and the user's input '9'. The output is: 'Exiting application. Thank You for Choosing Us !'.

```
158     }
159     break;
160     case 9:
161         System.out.println("Exiting application. \n Thank You for Choosing Us !");
162         break;
163     default:
164         System.out.println("Invalid choice.");
165     }
166     while(choice != 9);
167     scanner.close();
168 }
169 }
170 }
```

Virtual Art Gallery Menu:  
1. Add Artwork  
2. Update Artwork  
3. Remove Artwork  
4. Get Artwork By ID  
5. Search Artworks  
6. Add Artwork to Favorites  
7. Remove Artwork from Favorites  
8. Get User Favorite Artworks  
9. Exit  
Enter your choice: 9  
Exiting application.  
Thank You for Choosing Us !