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Collection Program:

Employee.java

```
package collection_fw;

public class Employee {
    private int empid;
    private String empName;
    private float empsal;

    public Employee(int empid, String empName, float empsal) {
        // TODO Auto-generated constructor stub
        this.empid=empid;
        this.empName=empName;
        this.empsal=empsal;
    }
    public int getEmpid()
    {
        return empid;
    }
    public String getEmpName() {
        return empName;
    }
    public void setEmpName(String empName) {
        this.empName = empName;
    }
    public float getEmpsal() {
        return empsal;
    }
    public void setEmpsal(float empsal) {
        this.empsal=empsal;
    }
    public void setEmpid(int empid) {
        this.empid = empid;
    }
    @Override
    public String toString() {
        return "Employee [empid=" + empid + ", empName=" + empName + ",
empsal=" + empsal + ", getEmpid()=" + getEmpid()
        + ", getEmpName()=" + getEmpName() + ", getEmpsal()=" +
getEmpsal() + ", getClass()=" + getClass()
        + ", hashCode()=" + hashCode() + ", toString()=" +
super.toString() + "]\n";
    }
}
```

EmployeeListDemo.java

```

package collection_fw;

import java.util.ArrayList;
import java.util.Collections;
import java.util.Iterator;
import java.util.List;

public class EmployeeListDemo {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        List<Employee> employees=new ArrayList<Employee>();
        Employee Emp=new Employee(101,"vaishali",2020.80f);
        employees.add(Emp);
        employees.add(new Employee(102,"rupali",9090.80f));
        employees.add(new Employee(102,"rupali",9090.80f));
        employees.add(new Employee(103,"pooja",9040.80f));
        employees.add(new Employee(104,"amruta",9050.80f));
        employees.add(new Employee(102,"rupali",9090.80f));
        System.out.println(employees);
        Iterator it=employees.listIterator();
        while(it.hasNext())
        {
            Employee emp=(Employee)it.next();

            System.out.println(emp.getEmpid()+"\t"+emp.getEmpName()+"\t"+emp.getEmpsal(
));
        }
        ArrayList<String>a1=new ArrayList<String>();
        for(int i=0;i<employees.size();i++)
        {
            Employee emp=employees.get(i);
            String name=emp.getEmpName();

```

```

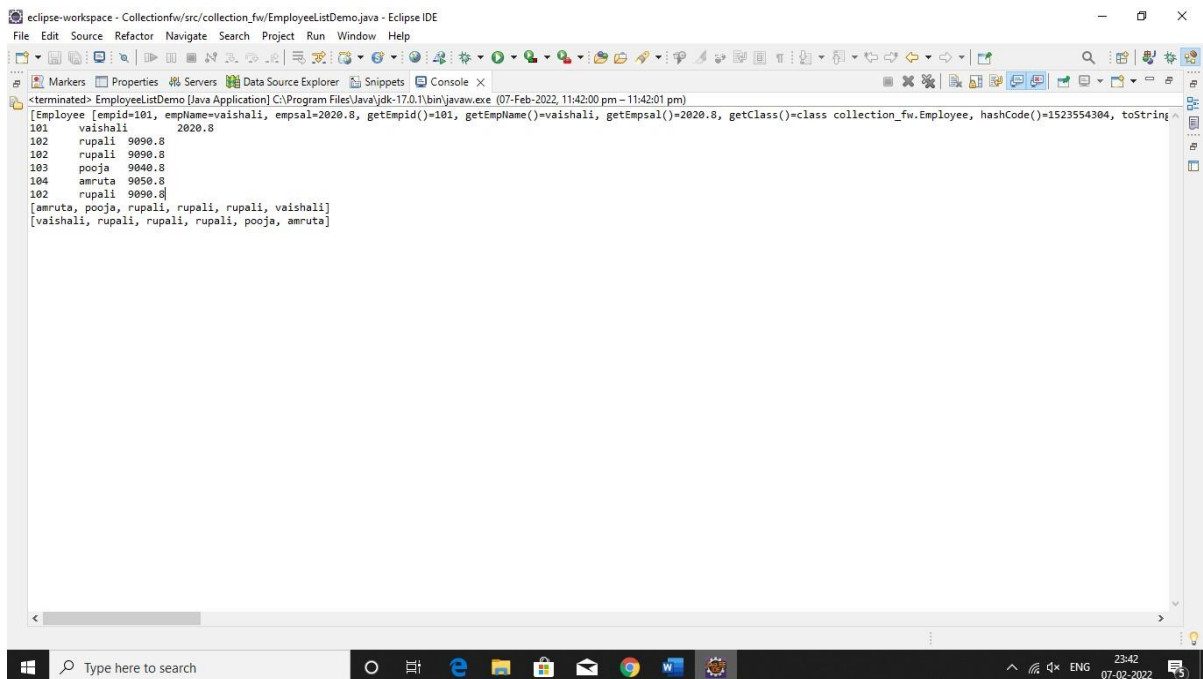
        a1.add(name);
    }

    Collections.sort(a1);
    System.out.println(a1);
    Collections.reverse(a1);
    System.out.println(a1);
}

}

```

Output:



```

eclipse-workspace - Collectionfw/src/collection_fw/EmployeeListDemo.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Markers Properties Servers Data Source Explorer Snippets Console
<terminated> EmployeeListDemo [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe (07-Feb-2022, 11:42:00 pm - 11:42:01 pm)
[Employee [empid=101, empName=vaishali, empsal=2020.8, getEmpid()=101, getEmpName()=vaishali, getEmpsal()=2020.8, getClass()=class collection_fw.Employee, hashCode()=1523554304, toString()=vaishali 2020.8]
101 vaishali 2020.8
102 rupali 9090.8
102 rupali 9090.8
103 pooja 9040.8
104 amruta 9050.8
102 rupali 9090.8]
[amruta, pooja, rupali, rupali, rupali, vaishali]
[vaishali, rupali, rupali, rupali, pooja, amruta]

```

Program 2:

Studentinfo.java

```

package collection_fw;

public class StudentInfo {
    private int RollNo;
    private String StName;
    private String StBranch;

    public StudentInfo(int rollNo, String stName, String stBranch)
    {
        this.RollNo = rollNo;
    }
}

```

```

        this.StName = stName;
        this.StBranch = stBranch;
    }
    public int getRollNo() {
        return RollNo;
    }
    public void setRollNo(int rollNo) {
        this.RollNo = rollNo;
    }
    public String getStName() {
        return StName;
    }
    public void setStName(String stName) {
        this.StName = stName;
    }
    public String getStBranch() {
        return StBranch;
    }
    public void setStBranch(String stBranch) {
        this.StBranch = stBranch;
    }
    @Override
    public String toString() {
        return "StudentInfo [rollNo=" + RollNo + ", stName=" + StName + ",
stBranch=" + StBranch + ", getRollNo()="
            + getRollNo() + ", getStName()=" + getStName() + ",
getStBranch()=" + getStBranch() + ", getClass()="
            + getClass() + ", hashCode()=" + hashCode() + ",
toString()=" + super.toString() + "];"
    }
}

```

Studentdemo.java

```

package collection_fw;

import java.util.ArrayList;
import java.util.Collections;
import java.util.Iterator;
import java.util.List;

public class StudentDemo {

```

```

public static void main(String[] args) {
    // TODO Auto-generated method stub

    List<StudentInfo> stInfo=new
ArrayList<StudentInfo>();

    StudentInfo Info=new
StudentInfo(01,"vaishali","cse");
    stInfo.add(Info);
    stInfo.add(new StudentInfo(02,"rupali","mech"));
    stInfo.add(new StudentInfo(03,"amruta","cs"));
    System.out.println(stInfo);
    Iterator it=stInfo.listIterator();
    while(it.hasNext())
    {
        StudentInfo st=(StudentInfo)it.next();

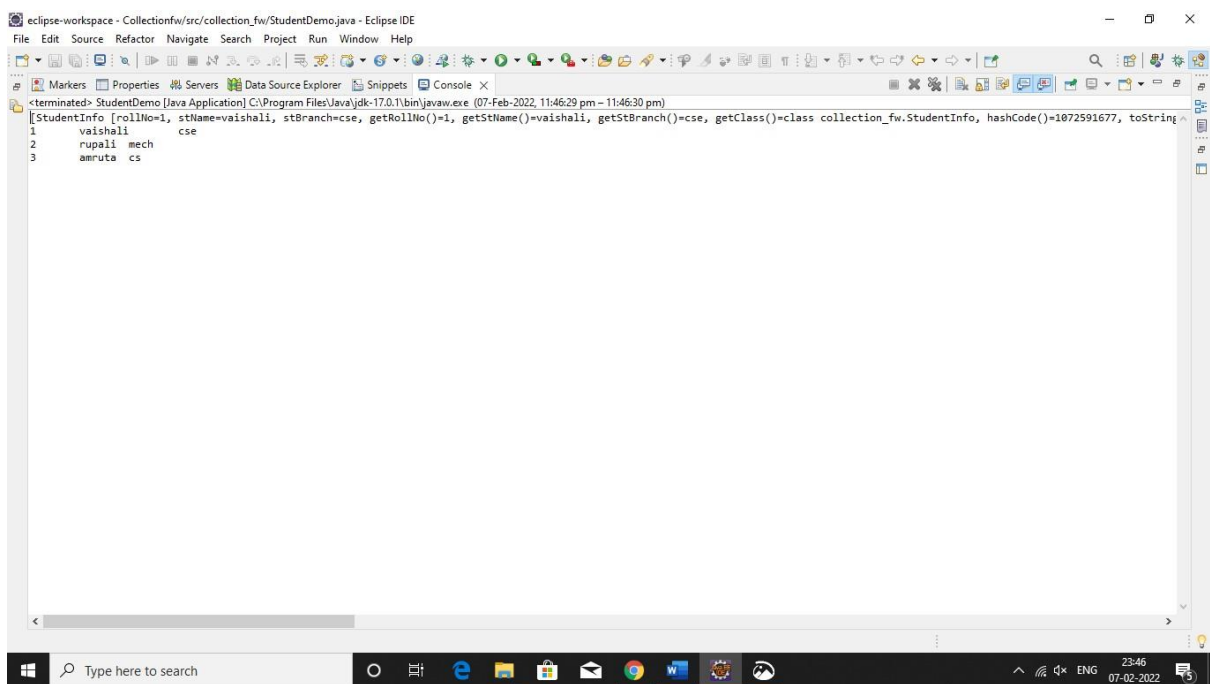
        System.out.println(st.getRollNo()+"\t"+st.getStName()
+"\t"+st.getStBranch());

        /*ArrayList<String>a1=new
ArrayList<String>();
        for(int i=0;i<stInfo.size();i++)
        {
            StudentInfo emp=stInfo.get(i);
            String name=emp.getStName();
            a1.add(name);
        }
        Collections.sort(a1);
        System.out.println(a1);
        Collections.reverse(a1);
        System.out.println(a1);*/
    }
}

```

```
}  
  
}  
  
}
```

Output:



The screenshot shows the Eclipse IDE interface. The console window displays the following output:

```
<terminated> StudentDemo [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe (07-Feb-2022, 11:46:29 pm - 11:46:30 pm)  
[StudentInfo [rollNo=1, stName=vaishali, stBranch=cse, getRollNo()=1, getStName()=vaishali, getStBranch()=cse, getClass()=class collection_fw.StudentInfo, hashCode()=1072591677, toString()=1  
1 vaishali cse  
2 rupali mech  
3 amruta cs
```

The IDE title bar shows "eclipse-workspace - Collectionfw/src/collection_fw/StudentDemo.java - Eclipse IDE". The bottom status bar shows the system clock as 23:46 on 07-02-2022.

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