

## Array list

### Assignment

```
import java.util.ArrayList;
```

```
import java.util.List;
```

```
class Participant {
```

```
    private String participantName;
```

```
    private String participantTalent;
```

```
    private double participantScore;
```

```
    public Participant(String participantName, String participantTalent, double participantScore) {
```

```
        this.participantName = participantName;
```

```
        this.participantTalent = participantTalent;
```

```
        this.participantScore = participantScore;
```

```
    }
```

```
    public String getParticipantName() {
```

```
        return participantName;
```

```
    }
```

```
    public void setParticipantName(String participantName) {
```

```
        this.participantName = participantName;
```

```
    }
```

```
    public String getParticipantTalent() {
```

```
        return participantTalent;
```

```
    }
```

```
public void setParticipantTalent(String participantTalent) {  
    this.participantTalent = participantTalent;  
}
```

```
public double getParticipantScore() {  
    return participantScore;  
}
```

```
public void setParticipantScore(double participantScore) {  
    this.participantScore = participantScore;  
}
```

@Override

```
public String toString() {  
    return "Participant Name: " + participantName +  
        ", Participant Talent: " + participantTalent +  
        ", Participant Score: " + participantScore;  
}  
}
```

```
class Tester {
```

```
    public static List<Participant> generateListOfFinalists(Participant[] finalists) {  
        List<Participant> finalistsList = new ArrayList<>();  
        for (Participant finalist : finalists) {  
            finalistsList.add(finalist);  
        }  
    }  
}
```

```
    }  
    return finalistsList;  
}
```

```
public static List<Participant> getFinalistsByTalent(List<Participant> finalists, String talent) {  
    List<Participant> finalistsByTalent = new ArrayList<>();  
    for (Participant finalist : finalists) {  
        if (finalist.getParticipantTalent().equals(talent)) {  
            finalistsByTalent.add(finalist);  
        }  
    }  
    return finalistsByTalent;  
}
```

```
public static void main(String[] args) {  
    Participant finalist1 = new Participant("Hazel", "Singing", 91.2);  
    Participant finalist2 = new Participant("Ben", "Instrumental", 95.7);  
    Participant finalist3 = new Participant("John", "Singing", 94.5);  
    Participant finalist4 = new Participant("Bravo", "Singing", 97.6);  
  
    Participant[] finalists = {finalist1, finalist2, finalist3, finalist4};  
  
    List<Participant> finalistsList = generateListOfFinalists(finalists);  
  
    System.out.println("Finalists:");  
    for (Participant finalist : finalistsList) {  
        System.out.println(finalist);  
    }  
}
```

```

    }

    String talent = "Singing";

    System.out.println("\nFinalists in " + talent + " category:");

    List<Participant> finalistsCategoryList = getFinalistsByTalent(finalistsList, talent);

    for (Participant finalist : finalistsCategoryList) {

        System.out.println(finalist);

    }

}

}

```

Output-

```

C:\Users\student\Desktop>java Tester
Finalists:
Participant Name: Hazel, Participant Talent: Singing, Participant Score: 91.2
Participant Name: Ben, Participant Talent: Instrumental, Participant Score: 95.7
Participant Name: John, Participant Talent: Singing, Participant Score: 94.5
Participant Name: Bravo, Participant Talent: Singing, Participant Score: 97.6

Finalists in Singing category:
Participant Name: Hazel, Participant Talent: Singing, Participant Score: 91.2
Participant Name: John, Participant Talent: Singing, Participant Score: 94.5
Participant Name: Bravo, Participant Talent: Singing, Participant Score: 97.6

```