

PROGRAM – 1

```
class Player{

    String name;

    int age;

    Player(String n,int a){

        name=n;

        age=a;

    }

    void show()

    {

        System.out.println("Player name: "+name);

        System.out.println("Age: "+age);

    }

}

class cricket_player extends Player{

    String type;

    cricket_player(String n,String t,int a){

        super(n,a);

        type=t;

    }

    public void show()

    {

        super.show();

        System.out.println("Player type : "+type);

    }

}
```

```
class football_player extends Player{  
    String type;  
    football_player(String n,String t,int a)  
{  
    super(n,a);  
    type=t;  
}  
    public void show()  
{  
    super.show();  
    System.out.println("Player type : "+type);  
}  
}
```

```
class hockey_player extends Player{  
    String type;  
    hockey_player(String n,String t,int a)  
{  
    super(n,a);  
    type=t;  
}  
    public void show()  
{  
    super.show();  
    System.out.println("Player type : "+type);  
}  
}
```

```

    }

    public class Main{

        public static void main(String args[])

        {

            cricket_player c=new cricket_player("Rohit","Cricket",20);

            football_player f=new football_player("Rahul","Football",21);

            hockey_player h=new hockey_player("Aditya","Hockey",22);

            c.show();

            f.show();

            h.show();

        }

    }

```



The screenshot shows a Java IDE with a dark theme. The top pane displays the source code for a `Player` class and a `Main` class. The `Player` class has attributes `String name` and `int age`, a constructor `Player(String n, int a)`, and a `show()` method. The `Main` class has a `main` method that creates three objects: `cricket_player` (Rohit, 20), `football_player` (Rahul, 21), and `hockey_player` (Aditya, 22), and calls their `show()` methods. The bottom pane shows the output of the program, which prints the details of each player in the order they were created. The output is:

Player name: Rohit

Age: 20

Player type : Cricket

Player name: Rahul

Age: 21

Player type : Football

Player name: Aditya

Age: 22

Player type : Hockey

The IDE also shows a status bar at the bottom indicating the program finished with exit code 0 and a prompt to press ENTER to exit the console.

```

1 class Player{
2     String name;
3     int age;
4     Player(String n,int a){
5         name=n;
6         age=a;
7     }
8 }
9
10 void show()
11 {
12     System.out.println("Player name: "+name);
13     System.out.println("Age: "+age);
14 }
15
16 }
17
18 //cricket_player extends Player
19

```

Player name: Rohit
 Age: 20
 Player type : Cricket
 Player name: Rahul
 Age: 21
 Player type : Football
 Player name: Aditya
 Age: 22
 Player type : Hockey

 ...Program finished with exit code 0
 Press ENTER to exit console.

PROGRAM - 2

```
class Rectangle{

    int length, breadth;

    Rectangle(int l, int b){

        length = l;

        breadth = b;

    }

    void area(){

        System.out.println("Area of Rectangle: "+(length*breadth));

    }

    void perimeter(){

        System.out.println("Perimeter of Rectangle: "+ (2*(length+breadth)));

    }

}

class Square extends Rectangle{

    int side;

    Square(int s, int l, int b){

        super(l, b);

        side = s;

    }

    public void area(){

        super.area();

        System.out.println("Area of Square: "+(side*side));

    }

    public void perimeter(){

        super.perimeter();

        System.out.println("Perimeter of Square: "+(4*side));

    }

}
```

```
}  
}
```

```
public class Main
```

```
{  
  
    public static void main(String[] args) {  
  
        Square sq = new Square(8, 20, 15);  
  
        sq.area();  
  
        sq.perimeter();  
  
    }  
}
```

```
1 class Rectangle{  
2     int length, breadth;  
3     Rectangle(int l, int b){  
4         length = l;  
5         breadth = b;  
6     }  
7  
8     void area(){  
9         System.out.println("Area of Rectangle: "+(length*breadth));  
10    }  
11  
12    void perimeter(){  
13        System.out.println("Perimeter of Rectangle: "+ (2*(length+breadth)));  
14    }  
15 }  
16  
17 class Square extends Rectangle{  
18     int side;  
19  
20     void area(){  
21         System.out.println("Area of Square: "+(side*side));  
22     }  
23  
24     void perimeter(){  
25         System.out.println("Perimeter of Square: "+ (4*side));  
26     }  
27 }  
28  
29 public class Main  
30 {  
31  
32     public static void main(String[] args) {  
33  
34         Square sq = new Square(8, 20, 15);  
35  
36         sq.area();  
37  
38         sq.perimeter();  
39  
40     }  
41 }  
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```

```
Area of Rectangle: 300  
Area of Square: 64  
Perimeter of Rectangle: 70  
Perimeter of Square: 32  
  
...Program finished with exit code 0  
Press ENTER to exit console.
```