

题目描述：

有 N ($3 \leq N < 10000$) 个运动员，他们的 id 为 0 到 $N-1$ ，他们的实力由一组整数表示。他们之间进行比赛，需要决出冠亚军。比赛的规则是 0 号和 1 号比赛， 2 号和 3 号比赛，以此类推，每一轮，相邻的运动员进行比赛，获胜的进入下一轮；实力值大的获胜，实力值相等的情况， id 小的情况下获胜；轮空的直接进入下一轮。

输入描述：

输入一行 N 个数字代表 N 的运动员的实力值 ($0 \leq \text{实力值} \leq 1000000000$)。

输出描述：

输出冠亚军的 id ，用空格隔开。

示例 1

输入：

2 3 4 5

输出：

3 1 2

说明：

第一轮比赛， id 为 0 实力值为 2 的运动员和 id 为 1 实力值为 3 的运动员比赛， 1 号胜出进入下一轮争夺冠亚军， id 为 2 的运动员和 id 为 3 的运动员比赛， 3 号胜出进入下一轮争夺冠亚军；冠亚军比赛， 3 号胜 1 号；故冠军为 3 号，亚军为 1 号。 2 号与 0 号，比赛进行季军的争夺， 2 号实力值为 4 ， 0 号实力值 2 ，故 2 号胜出，得季军。冠亚季军为 3 1 2 。

```
import java.util.ArrayList;
import java.util.List;
import java.util.Scanner;
```

```
public class Main {
```

```

public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
    String[] scoreList = sc.nextLine().split(" ");
    List<Player> players = new ArrayList<>();
    for (int i = 0; i < scoreList.length; i++) {
        players.add(new Player(i, Long.parseLong(scoreList[i])));
    }
    List<Player> res = play(players);
    System.out.println(res.get(0).index + " " + res.get(1).index + " " + res.get(2).index);
}

```

```

private static List<Player> play(List<Player> players) {
    List<Player> res = new ArrayList<>();
    if (players.size() == 4) {
        Player loss1 = null;
        Player win1 = null;
        if (players.get(0).score >= players.get(1).score) {
            win1 = players.get(0);
            loss1 = players.get(1);
        } else {
            win1 = players.get(1);
            loss1 = players.get(0);
        }

        Player loss2 = null;
        Player win2 = null;
        if (players.get(2).score >= players.get(3).score) {
            win2 = players.get(2);
            loss2 = players.get(3);
        } else {
            win2 = players.get(3);
            loss2 = players.get(2);
        }

        if (win1.score >= win2.score) {
            res.add(win1);
            res.add(win2);
        } else {
            res.add(win2);
            res.add(win1);
        }

        if (loss1.score >= loss2.score) {
            res.add(loss1);

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        } else {
            res.add(loss2);
        }

        return res;
    }
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    if (players.size() <= 3) {
        Player loss = null;
        Player win = null;
        if (players.get(0).score >= players.get(1).score) {
            loss = players.get(1);
            win = players.get(0);
        } else {
            loss = players.get(0);
            win = players.get(1);
        }
        if (win.score >= players.get(2).score) {
            res.add(win);
            res.add(players.get(2));
        } else {
            res.add(players.get(2));
            res.add(win);
        }
        players.add(loss);
        return players;
    }

    int playSize = players.size() % 2 == 1 ? players.size() / 2 + 1 : players.size() / 2;

    for (int i = 0; i < playSize; i++) {
        if (2 * i + 1 >= players.size()) {
            res.add(players.get(2 * i));
        } else {
            Player player1 = players.get(2 * i);
            Player player2 = players.get(2 * i + 1);

            if (player1.score >= player2.score) {
                res.add(player1);
            } else {
                res.add(player2);
            }
        }
    }
}

```

```
        return play(res);
    }

    static class Player {

        int index;
        long score;

        public Player(int index, long score) {
            this.index = index;
            this.score = score;
        }
    }
}
```