

You are a traveler and traveling to a country where the currency denominations are unknown and as you travel you get to know about the denomination in random order. You want to make a payment of amount x, in such a way that the higher denomination is used to make exact payment. Input Take input of all the currency denominations ( random order) Take input of the amount that you want to pay. Output Print the minimum no of notes that you will be using to pay the net amount.

TestCase 1 enter the size of currency denominations 3 enter the currency denominations value 5 1 10 enter the amount you want to pay 12 Your payment approach in order to give min no of notes will be 10:1 1:2

TestCase 2 enter the size of currency denominations 5 enter the currency denominations value 60 5 12 78 25 enter the amount you want to pay 128 Your payment approach in order to give min no of notes will be 78:1 25:2

TestCase 3 enter the size of currency denominations 4 enter the currency denominations value 12 5 123 18 enter the amount you want to pay 158 Your payment approach in order to give min no of notes will be 123:1 18:1 12:1 5:1

Step 1

```
import java.util.Scanner;
```

```
public class CurrencyDenomination {  
    public static void main(String[] args) {
```

```
        Scanner sc = new Scanner(System.in);  
        System.out.println("enter the size of currency denominations");  
        int n = sc.nextInt();  
        int[] denominations = new int[n];  
        System.out.println("enter the currency denominations value");  
        for(int i=0; i<n; i++) {  
            denominations[i] = sc.nextInt();  
        }  
    }
```

Step 2

```
    System.out.println("enter the amount you want to pay");  
    int amount = sc.nextInt();  
    int result[] = getMinimumNumberOfNotes(denominations, n, amount);  
    System.out.println("Your payment approach in order to give min no of notes will  
be");  
    for(int i=0; i<n; i++) {
```

```

        if(result[i] != 0){
            System.out.println(denominations[i]+": "+result[i]);
        }
    }
}

```

Step 3

```
private static int[] getMinimumNumberOfNotes(int[] denominations, int n, int amount) {
```

```

    int[] result = new int[n];

    for(int i=n-1; i>=0; i--) {

        result[i] = amount/denominations[i];

        amount = amount%denominations[i];
    }
    return result;
}
}

```

Final code:

```
import java.util.Scanner;
```

```
public class CurrencyDenomination {
    public static void main(String[] args) {
```

```

        Scanner sc = new Scanner(System.in);
        System.out.println("enter the size of currency denominations");
        int n = sc.nextInt();
        int[] denominations = new int[n];
        System.out.println("enter the currency denominations value");
        for(int i=0; i<n; i++) {
            denominations[i] = sc.nextInt();
        }
        System.out.println("enter the amount you want to pay");
        int amount = sc.nextInt();
        int result[] = getMinimumNumberOfNotes(denominations, n, amount);
        System.out.println("Your payment approach in order to give min no of notes will be");
        for(int i=0; i<n; i++) {

```

```
        if(result[i] != 0){
            System.out.println(denominations[i]+": "+result[i]);
        }
    }
}

private static int[] getMinimumNumberOfNotes(int[] denominations, int n, int amount) {
    int[] result = new int[n];
    for(int i=n-1; i>=0; i--) {
        result[i] = amount/denominations[i];
        amount = amount%denominations[i];
    }
    return result;
}
}
```