

act class Instrument which is having the abstract  
more sub classes from Instrument which is Piano,  
play method inside all three classes printing a  
ng tan tan tan tan " for Piano class  
ng toot toot toot toot " for Flute class  
ng tin tin tin " for Guitar class  
allow the user to declare an object of Instrument  
y of 10 Instruments.  
t type of instrument to Instrument reference.  
polymorphic behavior of play method.  
eof operator to print that which object stored at  
trument array.

ACCEPTED SCORE: 100 points (100%)

INPUT OUTPUT

Java 8 RUN CODE

```
1 import java.io.*;
2 import java.util.*;
3 import java.text.*;
4 import java.math.*;
5 import java.util.regex.*;
6
7 // Class name should be "Source",
8 // otherwise solution won't be accepted
9 abstract class Instrument
10 {
11     abstract void play();
12 }
13 class Piano extends Instrument
14 {
15     @Override
16     void play()
17     {
18         System.out.println("Piano");
19     }
20 }
21
22 class Flute extends Instrument
23 {
24     @Override
25     void play()
```

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input:2

output:2

```
50 Scanner in = new Scanner(System.in);
51 Instrument[] is=new Instrument[10];
52
53 // Declare the variable
54 int a;
55
56 // Read the variable from STDIN
57 a = in.nextInt();
58 if(a==1)
59 {
60     for(int i=0;i<10;i++)
61     {
62         is[i]=new Piano();
63     }
64     for(int i=0;i<10;i++)
65     {
66         is[i].play();
67     }
68     /* for(int i=0;i<10;i++)
69     {
70         if(is[i] instanceof Piano)
71         {
72             System.out.println("Piano is stored at index "+i);
73         }
74     } */
75 }
76 else
77 if(a==2)
```

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Sample Input:1  
3  
Sample Output:1  
Guitar  
Guitar  
Guitar  
Guitar  
Guitar  
Guitar  
Guitar  
Guitar  
Guitar  
Guitar

```
20 }  
21 class Flute extends Instrument  
22 {  
23     @Override  
24     void play()  
25     {  
26         System.out.println("Flute");  
27     }  
28 }  
29  
30  
31 class Guitar extends Instrument  
32 {  
33     @Override  
34     void play()  
35     {  
36         System.out.println("Guitar");  
37     }  
38  
39 }  
40  
41  
42  
43 public class Source {  
44     public static void main(String[] args) {  
45  
46         Scanner in = new Scanner(System.in);  
47         Instrument[] is=new Instrument[10];  
48  
49         // Declare the variable  
50         int a;  
51
```

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Piano

Piano

Piano

Piano

EXECUTION TIME LIMIT

10 seconds

```
75     }
76     else
77     {
78         for(int i=0;i<10;i++)
79         {
80             is[i]=new Flute();
81         }
82         for(int i=0;i<10;i++)
83         {
84             is[i].play();
85         }
86     }
87     /* for(int i=0;i<10;i++)
88     {
89         if(is[i] instanceof Flute)
90         {
91             System.out.println("Flute is stored at index "+i);
92         }
93     } */
94     else
95     {
96         for(int i=0;i<10;i++)
97         {
98             is[i]=new Guitar();
99         }
100        for(int i=0;i<10;i++)
101        {
102            is[i].play();
103        }
104        /* for(int i=0;i<10;i++)
```

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```

100     }
101     }
102     else
103     {
104         for(int i=0;i<10;i++)
105         {
106             is[i]=new Guitar();
107         }
108         for(int i=0;i<10;i++)
109         {
110             is[i].play();
111         }
112     }
113     /* for(int i=0;i<10;i++)
114     {
115         if(is[i] instanceof Guitar)
116         {
117             System.out.println("Guitar is stored at index "+i);
118         }
119     }
120     */
121 }
122 // Output the variable to STDOUT
123 // System.out.println(a);
124 }
125 }

```

3 revisions found for this solution.

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