

Java Assignment
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2K19/SE/077

Q1:

1

121

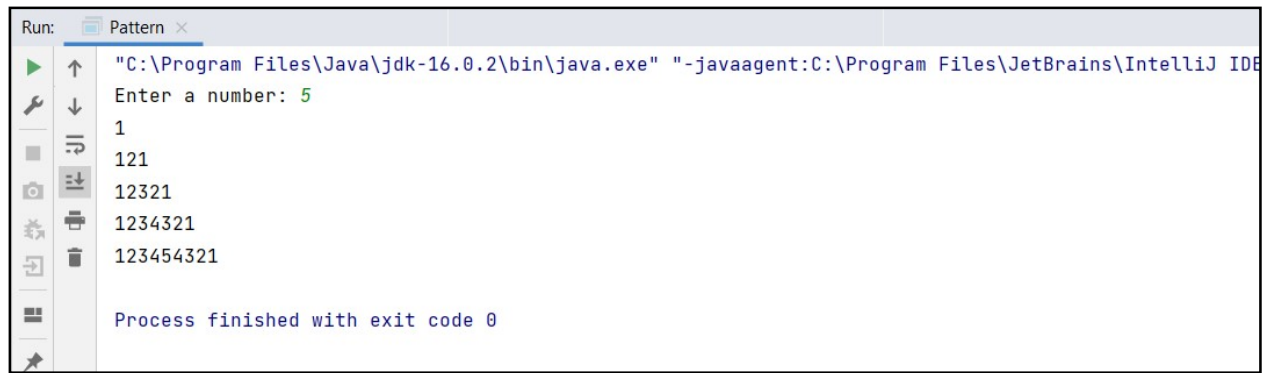
12321

1234321

123454321

```
package com.company;
import java.io.*;
import java.util.*;
```

```
public class Pattern {
    public static void main(String[] args) {
        Scanner in = new Scanner(System.in);
        System.out.print("Enter a number: ");
        int n=in.nextInt();
        int i=1;
        while(i<=n) {
            int j=1;
            while(j<=i) {
                System.out.print(j);
                j++;
            }
            j=i-1;
            while(j>=1) {
                System.out.print(j);
                j--;
            }
            i++;
            System.out.println();
        }
    }
}
```



The screenshot shows a Java IDE's Run console window. The title bar says "Run: Pattern x". The command line shows the execution of java.exe with a specific javaagent. The program prompts the user to "Enter a number: 5". The output shows a pattern of numbers: 1, 121, 12321, 1234321, and 123454321. The console ends with "Process finished with exit code 0".

```
Run: Pattern x
"C:\Program Files\Java\jdk-16.0.2\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDE
Enter a number: 5
1
121
12321
1234321
123454321

Process finished with exit code 0
```

Q2:

a

ab

abc

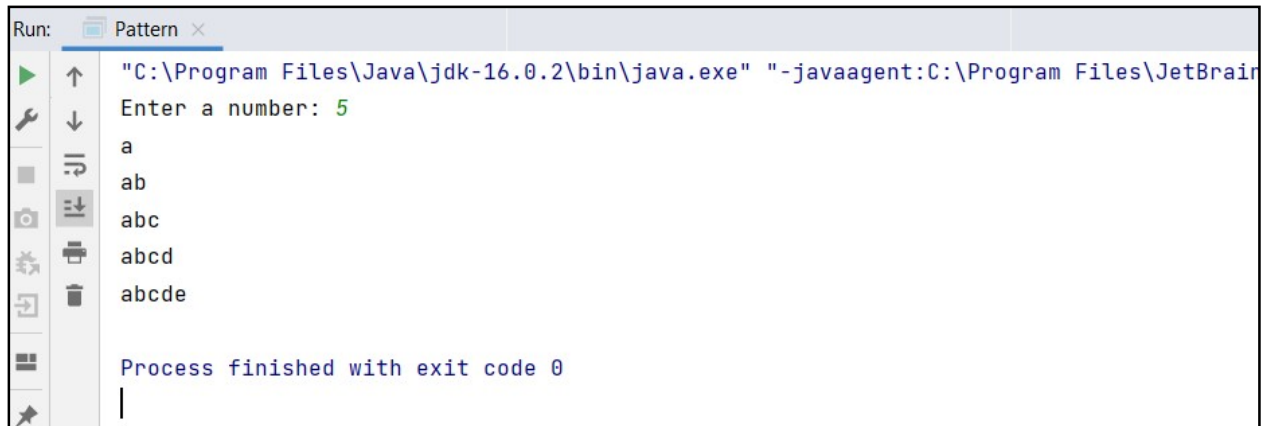
abcd

abcde

```
package com.company;
import java.io.*;
import java.util.*;
```

```
public class Pattern {
    public static void main(String[] args) {
        Scanner in = new Scanner(System.in);
        System.out.print("Enter a number: ");
        int n=in.nextInt();
        int i=1;
        while (i<=n)
        {
            char alphabet='a';
            int j=1;
            while (j<=i)
            {
                System.out.print(alphabet);
                alphabet++;
                j++;
            }
            i++;
            System.out.println();
        }
    }
}
```

```
}  
}
```



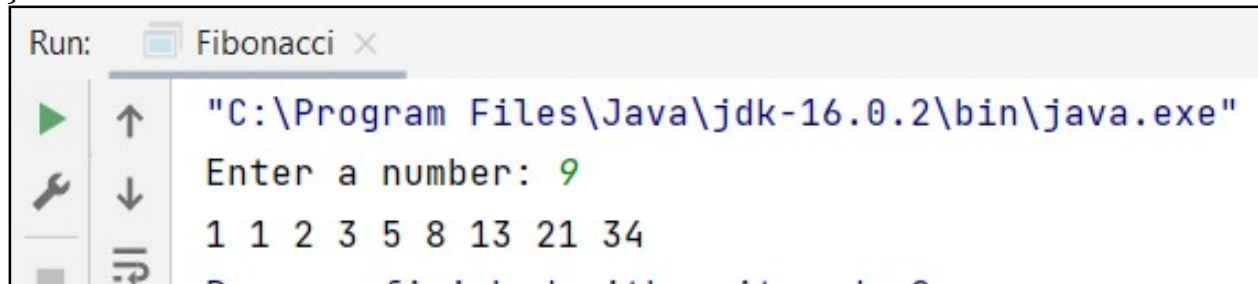
```
Run: Pattern x  
"C:\Program Files\Java\jdk-16.0.2\bin\java.exe" "-javaagent:C:\Program Files\JetBrain  
Enter a number: 5  
a  
ab  
abc  
abcd  
abcde  
  
Process finished with exit code 0  
|
```

Q3:

1 1 2 3 5 8 13 21 34 55

```
package com.company;  
import java.io.*;  
import java.util.*;  
public class Fibonacci {  
    static void fib(int n)  
    {  
        int a = 1, b = 1, c;  
        if(n==0)  
            return;  
        if(n==1)  
        {  
            System.out.print("1");  
            return;  
        }  
        System.out.print("1 1 ");  
        int i=3;  
        while (i<=n){  
            c = a + b;  
            System.out.print(c+" ");  
            a = b;  
            b = c;  
            i++;  
        }  
    }  
}  
public static void main (String args[])  
{
```

```
Scanner in = new Scanner(System.in);  
System.out.print("Enter a number: ");  
int n=in.nextInt();  
fib(n);  
}  
}
```



The screenshot shows a Java IDE's Run console window. The title bar reads "Run: Fibonacci x". The console output is as follows:

```
"C:\Program Files\Java\jdk-16.0.2\bin\java.exe"  
Enter a number: 9  
1 1 2 3 5 8 13 21 34
```

On the left side of the console, there is a vertical toolbar with icons for running (a green play button), stepping through code (up and down arrows), and other debugging actions (a wrench and a magnifying glass).