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053

Test 2

Q. 1) Find factorial of a number using Recursive function

```java
public static void main(String[] args) {
Scanner in = new Scanner(System.in);
System.out.println("enter a num");
int n = in.nextInt();
if(n>=0) {
System.out.println("factorial is : "+ factorial(n));
}
else {
System.out.println("invalid input");
}
}
public static int factorial(int n) {
int c = 1;
int res = 1;
while(c<=n) {
res = res*c;
c++;
}
return res;
}
```

Q. 2) Find Fibonacci series in following pattern
1
2 3
5 8 13

```java
public static void main(String[] args) {
Scanner in= new Scanner(System.in);
System.out.println("enter num of rows ");
int n =in.nextInt();
```

```java
int a = 0;
int b = 1;
for (int i = 0; i < n; i++) {
for (int j = 0; j <=i; j++) {
int c = a+b;
System.out.print(c+" ");
a= b;
b = c;
}
System.out.println();
}
}
```

Q3
A)

```java
public static void main(String[] args) {
for (int i = 3; i >0; i--) {
for (int j = 0; j< i ; j++) {
System.out.print(" ");
}
for (int k = 3; k>=i ; k--) {
System.out.print(k);
}
for (int l = i+1; l <4; l++) {
System.out.print(l);
}
System.out.println();
}
for (int i = 0; i < 3; i++) {
System.out.print(" ");
for (int j = 0; j < i+1; j++) {
System.out.print(" ");
}
for (int k = 3; k >i+1; k--) {
System.out.print(k);
}
for (int l = i+3; l==3 ; l--) {
System.out.print(l);
}
System.out.println();
}
}
```

B)

```
b)
***
**
*
```

```
public static void main(String[] args) {
for (int i = 3; i >0; i--) {
for (int j = 0; j < i; j++) {
System.out.print("*");
}
System.out.println();
}
}
```