1. **Find out the Strong no?**

**class** StrongNo {

**public** **static** **void** main(String[] args) {

**for** (**int** i = 1; i <=10000; i++) {

**int** sum = 0, r,t = 0,n;

n=i;

t=n;

**while** (n > 0) {

r = n % 10;

**int** fact = 1;

**while** (r > 0) {

fact = fact \* r;

r--;

}

r = n % 10;

sum = sum + fact;

n = n / 10;

}

**if** (sum == t) {

System.***out***.println(t + " is a Strong no");

}

}

}

}

1. **Perfect No?**

**class** PerfectNo {

**public** **static** **void** main(String[] args) {

**for** (**int** i = 1; i <=10000; i++) {

**int** n=i;

**int** sum=0;

**for** (**int** j = 1; j <=n/2; j++) {

**if** (n%j==0) {

sum=sum+j;

}

}

**if** (sum==n) {

System.***out***.println(n+" is a perfect no");

}

}

}

}

1. **a**

**a b**

**a b c**

**a b c d**

**class** Abc {

**public** **static** **void** main(String[] args) {

**int** n=5;

**for** (**int** i = 1; i <= 5; i++) {

**for** (**int** j = 0; j < i; j++) {

System.***out***.printf("%c ",(97+j));

}

System.***out***.println();

}

}

}

4. 1

1 0 1

1 0 1 0 1

1 0 1 0 1 0 1

**class** Pyramid {

**public** **static** **void** main(String[] args) {

**int** n=4,sp=n-1;

**for** (**int** i = 0; i < n; i++) {

**for** (**int** j = 0; j < sp; j++) {

System.***out***.print(" ");

}

**for** (**int** j = 0; j < 2\*i+1; j++) {

**if** (j%2==0) {

System.***out***.print("1 ");

}**else** {

System.***out***.print("0 ");

}

}

System.***out***.println();

sp--;

}

}

}

5.

1

2 6

3 7 10

4 8 11 13

5 9 12 14 15

**class** One26 {

**public** **static** **void** main(String[] args) {

**int** n=5;

**for** (**int** i = 1; i <= n; i++) {

**int** k=i;

**for** (**int** j = 1; j <= i;) {

System.***out***.print(k+" ");

j++;

k+=n+1-j;

}

System.***out***.println();

}

}

}

6.

1

2 1 2

3 2 1 2 3

**class** TwoOneTow {

**public** **static** **void** main(String[] args) {

**int** r=3;

**int** spc=r-1;

**int** k=1;

**for** (**int** i = 0; i < r; i++) {

**for** (**int** j = 0; j < spc; j++) {

System.***out***.print(" ");

}

**for** (**int** j = 0; j <2\*i+1; j++) {

System.***out***.print(k+" ");

**if** (j<(2\*i+1)/2) {

k--;

}**else** {

k++;

}

}

System.***out***.println();

spc--;

}

}

}

7.

1

0 1

0 1 0

1 0 1 0

**class** OneZeroOne {

**public** **static** **void** main(String[] args) {

**int** n=4;

**int** spc=n-1;

**int** k=1;

**for** (**int** i = 0; i < n; i++) {

**for** (**int** j = 0; j < spc; j++) {

System.***out***.print(" ");

}

**for** (**int** j = 0; j <=i; j++) {

k++;

**if** (k%2!=0) {

System.***out***.print("0 ");

}**else** {

System.***out***.print("1 ");

}

}

System.***out***.println();

spc--;

}

}

}

8.

1

1 2 1

1 2 3 2 1

1 2 3 4 3 2 1

**class** One2One {

**public** **static** **void** main(String[] args) {

**int** n=4,spc=n-1;

**for** (**int** i = 0; i < n; i++) {

**int** k=1;

**for** (**int** j = 0; j <spc ; j++) {

System.***out***.print(" ");

}

**for** (**int** j = 0; j < 2\*i+1; j++) {

System.***out***.print(k+" ");

**if** (j<(2\*i+1)/2) {

k++;

}**else** {

k--;

}

}

System.***out***.println();

spc--;

}

}

}

9.

5

4 5 4

3 4 5 4 3

2 3 4 5 4 3 2

**class** FourFiveFour {

**public** **static** **void** main(String[] args) {

**int** n = 4, spc = n - 1, k = 5;

**for** (**int** i = 0; i < n; i++) {

**for** (**int** j = 0; j < spc; j++) {

System.***out***.print(" ");

}

**for** (**int** j = 0; j < 2 \* i + 1; j++) {

System.***out***.print(k + " ");

**if** (j < (2 \* i + 1) / 2) {

k++;

} **else** {

k--;

}

}

System.***out***.println();

spc--;

}

}

}

10.

1

2 3 2

3 4 5 4 3

4 5 6 7 6 5 4

**class** Tow3Two {

**public** **static** **void** main(String[] args) {

**int** n = 4, spc = n - 1;

**int** p=1;

**for** (**int** i = 0; i < n; i++) {

**int** k = p;

**for** (**int** j = 0; j < spc; j++) {

System.***out***.print(" ");

}

**for** (**int** j = 0; j < 2 \* i + 1; j++) {

System.***out***.print(k + " ");

**if** (j < (2 \* i + 1) / 2) {

k++;

} **else** {

k--;

}

}

System.***out***.println();

spc--;

p++;

}

}

}

11.