

QUESTION 1:

```
import java.util.Arrays;
```

```
import java.util.List;
```

```
import java.util.PriorityQueue;
```

```
class Main
```

```
{
```

```
    public static int findKthSmallest(List<Integer> l, int x)
```

```
    {
```

```
        PriorityQueue<Integer> pq = new PriorityQueue<>(l);
```

```
        while (--x > 0) {
```

```
            pq.poll();
```

```
        }
```

```
        return pq.peek();
```

```
    }
```

```
    public static void main(String[] args)
```

```
    {
```

```
        List<Integer> l = Arrays.asList(123, 456, 67, 8, 9, 12);
```

```
        int x = 4;
```

```
        System.out.println("Program by Manasa\nJava1\nSAP ID:51834754");
```

```
        System.out.println("The 4th smallest element in the array is " +
```

findKthSmallest(l, x));

}

}

```
1 import java.util.Arrays;
2 import java.util.List;
3 import java.util.PriorityQueue;
4
5 class Main
6 {
7     public static int findKthSmallest(List<Integer>
8     {
9         PriorityQueue<Integer> pq = new PriorityQueue<Integer>()
10
11         while (--x > 0) {
12             pq.poll();
13         }
14
15         return pq.peek();
16     }
17
18     public static void main(String[] args)
19     {
20         List<Integer> I = Arrays.asList(123, 456, 67, 89, 101, 112, 134, 156, 178, 199, 210, 221, 232, 243, 254, 265, 276, 287, 298, 309, 320, 331, 342, 353, 364, 375, 386, 397, 408, 419, 430, 441, 452, 463, 474, 485, 496, 507, 518, 529, 540, 551, 562, 573, 584, 595, 606, 617, 628, 639, 650, 661, 672, 683, 694, 705, 716, 727, 738, 749, 760, 771, 782, 793, 804, 815, 826, 837, 848, 859, 870, 881, 892, 903, 914, 925, 936, 947, 958, 969, 980, 991, 1002, 1013, 1024, 1035, 1046, 1057, 1068, 1079, 1090, 1101, 1112, 1123, 1134, 1145, 1156, 1167, 1178, 1189, 1200, 1211, 1222, 1233, 1244, 1255, 1266, 1277, 1288, 1299, 1310, 1321, 1332, 1343, 1354, 1365, 1376, 1387, 1398, 1409, 1420, 1431, 1442, 1453, 1464, 1475, 1486, 1497, 1508, 1519, 1530, 1541, 1552, 1563, 1574, 1585, 1596, 1607, 1618, 1629, 1640, 1651, 1662, 1673, 1684, 1695, 1706, 1717, 1728, 1739, 1750, 1761, 1772, 1783, 1794, 1805, 1816, 1827, 1838, 1849, 1860, 1871, 1882, 1893, 1904, 1915, 1926, 1937, 1948, 1959, 1970, 1981, 1992, 2003, 2014, 2025, 2036, 2047, 2058, 2069, 2080, 2091, 2102, 2113, 2124, 2135, 2146, 2157, 2168, 2179, 2190, 2201, 2212, 2223, 2234, 2245, 2256, 2267, 2278, 2289, 2300, 2311, 2322, 2333, 2344, 2355, 2366, 2377, 2388, 2399, 2410, 2421, 2432, 2443, 2454, 2465, 2476, 2487, 2498, 2509, 2520, 2531, 2542, 2553, 2564, 2575, 2586, 2597, 2608, 2619, 2630, 2641, 2652, 2663, 2674, 2685, 2696, 2707, 2718, 2729, 2740, 2751, 2762, 2773, 2784, 2795, 2806, 2817, 2828, 2839, 2850, 2861, 2872, 2883, 2894, 2905, 2916, 2927, 2938, 2949, 2960, 2971, 2982, 2993, 3004, 3015, 3026, 3037, 3048, 3059, 3070, 3081, 3092, 3103, 3114, 3125, 3136, 3147, 3158, 3169, 3180, 3191, 3202, 3213, 3224, 3235, 3246, 3257, 3268, 3279, 3290, 3301, 3312, 3323, 3334, 3345, 3356, 3367, 3378, 3389, 3400, 3411, 3422, 3433, 3444, 3455, 3466, 3477, 3488, 3499, 3510, 3521, 3532, 3543, 3554, 3565, 3576, 3587, 3598, 3609, 3620, 3631, 3642, 3653, 3664, 3675, 3686, 3697, 3708, 3719, 3730, 3741, 3752, 3763, 3774, 3785, 3796, 3807, 3818, 3829, 3840, 3851, 3862, 3873, 3884, 3895, 3906, 3917, 3928, 3939, 3950, 3961, 3972, 3983, 3994, 4005, 4016, 4027, 4038, 4049, 4060, 4071, 4082, 4093, 4104, 4115, 4126, 4137, 4148, 4159, 4170, 4181, 4192, 4203, 4214, 4225, 4236, 4247, 4258, 4269, 4280, 4291, 4302, 4313, 4324, 4335, 4346, 4357, 4368, 4379, 4390, 4401, 4412, 4423, 4434, 4445, 4456, 4467, 4478, 4489, 4500, 4511, 4522, 4533, 4544, 4555, 4566, 4577, 4588, 4599, 4610, 4621, 4632, 4643, 4654, 4665, 4676, 4687, 4698, 4709, 4720, 4731, 4742, 4753, 4764, 4775, 4786, 4797, 4808, 4819, 4830, 4841, 4852, 4863, 4874, 4885, 4896, 4907, 4918, 4929, 4940, 4951, 4962, 4973, 4984, 4995, 5006, 5017, 5028, 5039, 5050, 5061, 5072, 5083, 5094, 5105, 5116, 5127, 5138, 5149, 5160, 5171, 5182, 5193, 5204, 5215, 5226, 5237, 5248, 5259, 5270, 5281, 5292, 5303, 5314, 5325, 5336, 5347, 5358, 5369, 5380, 5391, 5402, 5413, 5424, 5435, 5446, 5457, 5468, 5479, 5490, 5501, 5512, 5523, 5534, 5545, 5556, 5567, 5578, 5589, 5600, 5611, 5622, 5633, 5644, 5655, 5666, 5677, 5688, 5699, 5710, 5721, 5732, 5743, 5754, 5765, 5776, 5787, 5798, 5809, 5820, 5831, 5842, 5853, 5864, 5875, 5886, 5897, 5908, 5919, 5930, 5941, 5952, 5963, 5974, 5985, 5996, 6007, 6018, 6029, 6040, 6051, 6062, 6073, 6084, 6095, 6106, 6117, 6128, 6139, 6150, 6161, 6172, 6183, 6194, 6205, 6216, 6227, 6238, 6249, 6260, 6271, 6282, 6293, 6304, 6315, 6326, 6337, 6348, 6359, 6370, 6381, 6392, 6403, 6414, 6425, 6436, 6447, 6458, 6469, 6480, 6491, 6502, 6513, 6524, 6535, 6546, 6557, 6568, 6579, 6590, 6601, 6612, 6623, 6634, 6645, 6656, 6667, 6678, 6689, 6700, 6711, 6722, 6733, 6744, 6755, 6766, 6777, 6788, 6799, 6810, 6821, 6832, 6843, 6854, 6865, 6876, 6887, 6898, 6909, 6920, 6931, 6942, 6953, 6964, 6975, 6986, 6997, 7008, 7019, 7030, 7041, 7052, 7063, 7074, 7085, 7096, 7107, 7118, 7129, 7140, 7151, 7162, 7173, 7184, 7195, 7206, 7217, 7228, 7239, 7250, 7261, 7272, 7283, 7294, 7305, 7316, 7327, 7338, 7349, 7360, 7371, 7382, 7393, 7404, 7415, 7426, 7437, 7448, 7459, 7470, 7481, 7492, 7503, 7514, 7525, 7536, 7547, 7558, 7569, 7580, 7591, 7602, 7613, 7624, 7635, 7646, 7657, 7668, 7679, 7690, 7701, 7712, 7723, 7734, 7745, 7756, 7767, 7778, 7789, 7800, 7811, 7822, 7833, 7844, 7855, 7866, 7877, 7888, 7899, 7910, 7921, 7932, 7943, 7954, 7965, 7976, 7987, 7998, 8009, 8020, 8031, 8042, 8053, 8064, 8075, 8086, 8097, 8108, 8119, 8130, 8141, 8152, 8163, 8174, 8185, 8196, 8207, 8218, 8229, 8240, 8251, 8262, 8273, 8284, 8295, 8306, 8317, 8328, 8339, 8350, 8361, 8372, 8383, 8394, 8405, 8416, 8427, 8438, 8449, 8460, 8471, 8482, 8493, 8504, 8515, 8526, 8537, 8548, 8559, 8570, 8581, 8592, 8603, 8614, 8625, 8636, 8647, 8658, 8669, 8680, 8691, 8702, 8713, 8724, 8735, 8746, 8757, 8768, 8779, 8790, 8801, 8812, 8823, 8834, 8845, 8856, 8867, 8878, 8889, 8900, 8911, 8922, 8933, 8944, 8955, 8966, 8977, 8988, 8999, 9010, 9021, 9032, 9043, 9054, 9065, 9076, 9087, 9098, 9109, 9120, 9131, 9142, 9153, 9164, 9175, 9186, 9197, 9208, 9219, 9230, 9241, 9252, 9263, 9274, 9285, 9296, 9307, 9318, 9329, 9340, 9351, 9362, 9373, 9384, 9395, 9406, 9417, 9428, 9439, 9450, 9461, 9472, 9483, 9494, 9505, 9516, 9527, 9538, 9549, 9560, 9571, 9582, 9593, 9604, 9615, 9626, 9637, 9648, 9659, 9670, 9681, 9692, 9703, 9714, 9725, 9736, 9747, 9758, 9769, 9780, 9791, 9802, 9813, 9824, 9835, 9846, 9857, 9868, 9879, 9890, 9901, 9912, 9923, 9934, 9945, 9956, 9967, 9978, 9989, 10000);
21         int x = 4;
22
23         System.out.println("Program by Manasa\nJava1");
24         System.out.println("The 4th smallest element in the array is " +
25                             findKthSmallest(I, x));
26     }
27 }
```

x Terminal

Program by Manasa  
Java1  
SAP ID:51834754  
The 4th smallest element in the array is 67  
  
Process finished.

QUESTION 2 :

```
import java.util.*;
```

```
class Main{
```

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

```
        Scanner sc=new Scanner(System.in);
```

```
        System.out.println("Program by Manasa\nJava1\nSap:51834754");
```

```
        System.out.println("enter the n");
```

```
        int n=sc.nextInt();
```

```
        for(int i=1;i<n+2;i++){
```

```
            for(int j=1;j<i;j++){
```

```
                System.out.print(j+",");
```

```
            }
```

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

```
        }
```

```
    }
```

```
}
```

```
import java.util.*;
class Main{
    public static void main(String args[]){
        Scanner sc=new Scanner(System.in);
        System.out.println("Program by Manasa\nJava1\nSap:51834754");
        System.out.println("enter the n");
        int n=sc.nextInt();
        for(int i=1;i<n+2;i++){
            for(int j=1;j<i;j++){
                System.out.print(j+",");
            }
            System.out.print(" ");
        }
    }
}
```

× Terminal

```
Program by Manasa
Java1
Sap:51834754
enter the n
3
1, 1,2, 1,2,3,
Process finished.
```

Question 3:

```
import java.util.*;
```

```
interface Laptop{
```

```
    abstract public void area();
```

```
    abstract public void company();
```

```
    abstract public void ram();
```

```
}
```

```
class Your_name implements Laptop{
    public void area(){
        System.out.println("100 sq.in");
    }
    public void company(){
        System.out.println("company is Dell");
    }
    public void ram(){
        System.out.println("64 gb ram");
    }

    public static void main(String[] args){
        Your_name o=new Your_name();
        System.out.println("Program By Manasa\nJava1\nSap:51834754");

        o.area();
        o.company();
        o.ram();
    }
}
```

```

1 import java.util.*;
2 interface Laptop{
3     abstract public void area();
4     abstract public void company();
5     abstract public void ram();
6 }
7 class Your_name implements Laptop{
8     public void area(){
9         System.out.println("100 sq.in");
10    }
11    public void company(){
12        System.out.println("company is Dell");
13    }
14    public void ram(){
15        System.out.println("64 gb ram");
16    }
17 }
18 public static void main(String[] args){
19     Your_name o=new Your_name();
20     System.out.println("Program By Manasa\nJava1\nSap:51834754");
21 }
22 o.area();
23 o.company();
24 o.ram();
25 }
26 }

```

× Terminal

```

Program By Manasa
Java1
Sap:51834754
100 sq.in
company is Dell
64 gb ram

Process finished.

```

QUESTION 5:

```
import java.util.*;
```

```
public class Main {
```

```

static void reverseWords(String str)
{
    System.out.println("Program by Manasa\nJava1\nSAP ID:51834754");
    Stack<Character> st=new Stack<Character>();

    for (int i = 0; i < str.length(); ++i) {
        if (str.charAt(i) != ' ')
            st.push(str.charAt(i));

        else {
            while (st.empty() == false) {
                System.out.print(st.pop());

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

```

QUIZ }

```

while (st.empty() == false) {
    System.out.print(st.pop());

}

}

```

```

public static void main(String[] args)
{
    String str = "Hi how are you? Hope you are doing well:~";

    reverseWords(str);
}
}

```

```

1  import java.util.*;
2
3  public class Main {
4
5      static void reverseWords(String str)
6      {
7          System.out.println("Program by Manasa\nJava1\nSAP ID:51834754");
8          Stack<Character> st=new Stack<Character>();
9
10         for (int i = 0; i < str.length(); ++i) {
11             if (str.charAt(i) != ' ')
12                 st.push(str.charAt(i));
13
14             else {
15                 while (st.empty() == false) {
16                     System.out.print(st.pop());
17
18                 }
19                 System.out.print(" ");
20             }
21         }
22
23         while (st.empty() == false) {
24             System.out.print(st.pop());
25
26         }
27     }
28
29     public static void main(String[] args)
30     {
31         String str = "Hi how are you? Hope you are doing well:~";
32         reverseWords(str);
33     }
34 }

```

x Terminal

```

Program by Manasa
Java1
SAP ID:51834754
iH woh era ?uoy epoH uoy era gniod ):llew
Process finished.

```





QUIZ MARKS :15