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SY MCA

Assignment: **Design a java application to demonstrate use of Set, Stack, Queue, Tree, Hash map Collections**

<Source\_Code>

import java.util.\*;

class Main {

public static void main(String[] args) {

/\* Stack \*/

Stack<Integer> stack = new Stack<Integer>();

stack.push(1);

stack.push(2);

stack.push(3);

System.out.println("Popped element: "+ stack.pop());

Iterator<Integer> itr = stack.iterator();

while(itr.hasNext()){

System.out.println(itr.next());

}

/\* Queue \*/

//priority queue

PriorityQueue<String> queue = new PriorityQueue<String>();

queue.add("high");

queue.add("low");

queue.add("mid");

queue.remove();

System.out.println("PriorityQueue: " + queue);

//Deque

Deque<String> dq = new ArrayDeque<String>();

dq.addLast("C");

dq.push("B");

dq.addFirst("A");

dq.removeFirst();

dq.removeLast();

System.out.println("Deque after removing "

+ "first and last: "

+ dq);

/\* Set \*/

//HashSet

HashSet<String> set=new HashSet<String>();

set.add("S");

set.add("Z");

set.add("X");

set.add("S");

System.out.println("HashSet:"+ set);

//LinkedHashSet

LinkedHashSet<Character> lhs = new LinkedHashSet<Character>();

lhs.add('S');

lhs.add('Z');

lhs.add('X');

lhs.add('S');

System.out.println("LinkedHashSet:"+ lhs);

//Sorted TreeSet

SortedSet<Character> ts = new TreeSet<Character>();

ts.add('S');

ts.add('Z');

ts.add('X');

ts.add('S');

System.out.println("Sorted TreeSet:"+ ts);

/\*\* Map \*/

//Sorted TreeMap

TreeMap<Integer,Character> tm=new TreeMap<Integer,Character>();

tm.put(1,'S');

tm.put(3,'Z');

tm.put(4,'X');

tm.put(2,'S');

System.out.println("Sorted TreeMap:"+ tm);

//HashMap

Map<Integer,Character> hm=new HashMap<Integer,Character>();

hm.put(1,'S');

hm.put(3,'Z');

hm.put(4,'X');

hm.put(2,'S');

System.out.println("HashMap:"+ hm);

}

}

<Output>

