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| Exp. No : 8 | | **Multithreading** |
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| **Choose your one questions based on the formulae given below,** | | |
| **Q1=((Regno%3)+1) Q2=Q1+3** | | |
| 1. | Write a program called ReverseHello.java that creates a thread (let's call it Thread 1). Thread 1 creates another thread (Thread 2); Thread 2 creates Thread 3; and so on, up to Thread 50. Each thread should print "Hello from Thread <num>!", but you should structure your program such that the threads print their greetings in reverse order. | |
| 2. | Write a program which takes as input a huge array of numbers. This array is split into n sub-arrays and n threads apply a bubble sort on each of the n sub-arrays. Lastly, another thread merges the n sorted sub-arrays into one with the same size as the original array. Of course, the resulting array should be sorted. | |
| 3. | Write a program in Java to perform the following operations on Matrix using multithreading. Get the required input matrix from the user and after that run three threads to perform the following operation.   * 1. Addition   2. Subtraction   3. Multiplication | |
| 4 | Write a simulation program for the fruit market. The farmer will be able to produce different types of fruits (apple, orange, grape, and watermelon), and put them in the market to sell. The market has limited capacity and farmers have to stand in a queue if the capacity is exceeded to sell their fruits. Consumers can come to the market any time and purchase their desired fruits; and if the fruits they want to buy runs out, they are willing to wait until the supply of that kind is ready. (Hint: implementing this market will encounter the producer and consumer problem, and it probably needs multiple buffers for different kinds of fruits). | |
| 5 | The Airplane always needs to check with the Airport to see if it has an available runway before it's able to take off or land. Simulate the above-mentioned scenario using multi-threading. | |
| 6 | Write a java application using the concepts of multithreading for a flower shop where flowers are delivered based on order. | |