## **WEB ENGINEERING**

**Course Instructor: Razi Ahmed** 

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**LAB 05** 

Synchronization & GUI with Event Handling

## Note:

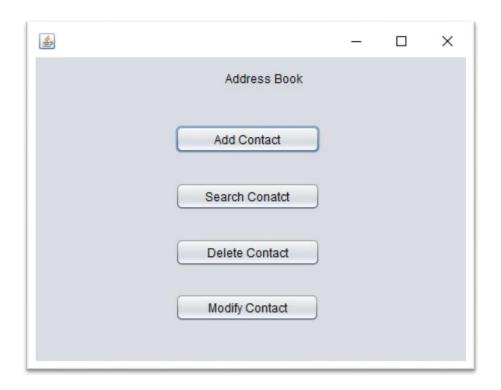
- Student collaboration is not allowed.
- Copying from or looking at solutions from other sources is strictly prohibited.
- Violations will not be excused and may result in an F in the course.
- Stay honest.

**TASK # 1**: Write a program that prints counter using two different threads by putting inside synchronized () block. Synchronization must be object level. The counter range must be from 1-5. Create a class **ThreadDemo** which is extended from Thread Class and implement run () function. Create a class **PrintDemo** that prints the counter. The output is given:

Marks[10]

```
Starting Thread - 1
Starting Thread - 2
Counter --- 5
Counter --- 4
Counter --- 3
Counter --- 2
Counter --- 1
Thread Thread - 1 exiting.
Counter ---
            5
Counter --- 4
Counter --- 3
Counter --- 2
Counter ---
            1
Thread Thread - 2 exiting.
BUILD SUCCESSFUL (total time: 0 seconds)
```

**TASK # 2**: Create AddressBook with GUI. Using Contact class and write functionality for add, search, delete, modify buttons. Marks[10]



## TASK # 3: (Bonus Task)

After Completion of task 2 You have to give following functionality:

- Next button will give next Contact from contacts list
- Previous button will give previous Contact from contacts list
- Save button will save all the records from contacts list into a file "contacts.txt"
- Load button will load all the data from "contacts.txt" into contacts list