Transaction Processing

Introduction to Transaction Processing, Transaction Processing Middleware and Introduction to CICS Programming.

- Forms the basis of many activities in day to day life – like banking, airline reservations, insurance, transportation, healthcare etc.
- Such systems have become more prevalent in Indian Industry due to large scale automation across various sectors.
- Large scale transaction processing systems like CICS handle billions of transactions daily across the globe and every transaction is critical.

This subject has large importance for the students planning to join the IT industry because these concepts are the basis of large systems forming the backbone of many corporations. Basics of the subjects will also be helpful to students planning to carry out academic research in the advanced topics like Web Services transactions.

The topic has gained relevance in India because of penetration of large scale IT infrastructure in the country and more and more organizations like large banking systems are moving towards usage of such large scale enterprise software.

How IBM will help:
IBM is the leading provider of large scale middleware systems where transactions and transaction processing forms the core. Because of its leadership and expertise in the area and being an industry leader in both product development and industrial research, IBM will be well-suited to partner with the academic institutions to prepare the students for topics of great relevance to the industry, both in India and worldwide. IBM can also provide exposure to the students with regards to real life situations where and how such products are used and deployed.

IBM has an elaborate University Relations program that can provides a strong network between the academia and IBM for collaborative learning on such topics like transaction processing.

Basics of these topics will introduce students to concepts like:
- How such critical transactions are recovered even when system failures happen
- The critical components of such middleware which are part of the IT
**Modules include**

**Introduction to Transaction Processing** with topics like logging, recovery, models of transactions, distributed transactions, two phase commit and failures and recovery in distributed transactions.

**Transaction Processing Monitors**

**Services offered by Transaction Processing Monitors** like communication services, administrative services, security services, data management service etc.

**Introduction to advanced topics** like replication, fail-overs, workload management, web services transactions, business transactions etc.

*Labs exercises will accompany for each of the sessions above. This will help students develop their own applications making use of the transaction processing monitors.*