

## QA TRAINING CURRICULUM

### General overview of SDLC (Software development life cycle) and QALC (Quality assurance life cycle)

- Role of QA during the course of SDLC.
- Role of QA during the course of QALC.
- QA methodology.

### Manual Testing:

- Identifying the scope.
- Identifying the functionality.
- Decomposing the Functional specifications.
- Preparing the Test Strategy.
- Preparing the Test Plan.
- Preparing Test scenarios
- Preparing Test Cases.
- Executing Test cases.
- Function Testing
- Database testing
- User Interface testing
- System Testing
- Integration Testing
- Verification
- Regression Testing
- Use acceptance Testing

- Reporting Bugs
- Monitoring Bug Life cycle.
- **Establishing Builds.**
  - QA build
  - Staging build
  - Integration build
  - Production

**Smoke testing the environment for stability.**

**Automated testing (Mercury and Rational suite).**

- Need for automation.
- Comparison between automation and manual
- Advantages of automation
- Disadvantages of automation
- Regression Testing (Winrunner & QTP)

**Writing Automation scripts.**

- Concepts of Test Scripting Language and VBScript.
- Record/Play.
- Custom Functions.

Parameterization.

Identifying checkpoints.

Data-driven Testing.

- Scheduling automated tests.
- Analyzing the results
- Reporting issues/bugs.

**Load/Performance Testing (Loadrunner & Rational Robot)**

**Differences between various types of load testing.**

- Capacity.

- Overall Performance
- Stress capabilities
- Reliability/Endurance
- Background Testing
- Scalability/Benchmarking.

### **Writing Load Test Scripts.**

- Loading Load scenarios
- Creating rendezvous point
- Creating Virtual Users using the VU generator.
- Running scenarios using the Controller.
- Parameterization
- Data-driven testing.

### **Analyzing the results.**

- Hits per second.
- Throughput.
- Bandwidth.
- Latency.
- System Response.
- Identifying the bottlenecks.
- Reporting bottlenecks.

### **Bug Reporting tool.**

Test Director.

### **Test director administration.**

- Adding Users.
- Assigning Roles.
- Implement Trace-ability Matrix.
- Define the bug cycle.

## Bug reporting.

- Severity.
- Priority.
- Assigning.
- Status.
- Change request.
- Reference to functional specifications through trace-ability matrix.

## Generating output status reports.

## Other Useful concepts.

## Testing on a mainframe environment

- JCL
- SPUFI
- TSO/ISPF

## Database validation.

- SQL/PL-SQL queries
- Liquid data queries
- TOAD
- ETL process

## Database schema

- Browser-specific testing.
- User interface /visual screen testing.
- Identifying the pixels.
- Testing Tips and Tricks.