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Tutorial NO. - 12

ON

SOFTWARE ENGINEERING(SSCS3010)

TITLE: Different Types of Performance Testing

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY (BSC-IT)

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TUTORIAL-12

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Aim: Different Types of Performance Testing

What is Performance Testing?

Performance testing checks how well the Resume Builder app works under different conditions (speed, stability, scalability, and reliability).

Types of Performance Testing

1. Load Testing

- **Checks performance under expected user load.**
- **Example (Resume Builder): 1,000 users uploading resumes and generating templates at the same time.**

2. Stress Testing

- **Pushes the system beyond normal limits to see when it breaks.**
- **Example (Resume Builder): 10,000 users try to generate PDFs at once until the system slows down or crashes.**

3. Spike Testing

- **Sudden increase or decrease in load to check system reaction.**
- **Example (Resume Builder): During job fair season, traffic jumps from 200 to 5,000 users within seconds.**

4. Endurance (Soak) Testing

- **Checks system stability over a long time under normal load.**



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- **Example (Resume Builder):** Keep 500 users logged in and generating resumes continuously for 48 hours to see if memory leaks or slowdowns occur.

5. Scalability Testing

- Checks if the system can handle growth by scaling up or down.
- **Example (Resume Builder):** Add more servers when traffic doubles to 2,000 users and test if resume generation and downloads still run smoothly.

6. Volume Testing

- Tests with a large amount of data.
- **Example (Resume Builder):** Uploading millions of resumes and profiles to check database performance and search speed.

♦ Easy Summary (Resume Builder Context)

- **Load** → 1,000 users generating resumes at once.
- **Stress** → Push to 10,000 users until crash.
- **Spike** → Sudden jump from 200 → 5,000 users.
- **Endurance** → Run app for 48 hrs with 500 users.
- **Scalability** → Add servers when users double.
- **Volume** → Store millions of resumes in DB.