



Introduction to Software Verification, Validation and Testing

Testing Principles and Best Practices

Objective



Objective

Explain best practices for software testing.

Testing Principles



| Principle 1:

- Testing only shows the presence of defects – not proof of correctness

| Principle 2:

- Exhaustive testing is impossible

| Principle 3:

- Start testing early

Testing Principles

why?

9/100

- complexity
- interfaces
- programmer
- pressure
- changes

| Principle 1:

- Testing only shows the presence of defects – not proof of correctness

| Principle 2:

- Exhaustive testing is impossible

| Principle 3:

- Start testing early

| Principle 4:

- Defects cluster

| Principle 5:

- Testing is context dependent

| Principle 6:

- Absence-of-errors fallacy

✓
1k
✓
2k
✓
3k
4k

Testing Attitude

SF Licensing

Education / Experience / Tests

TEXAS

Independence

Customer perspective

Demonstrate that the system works (test intended functionality)

Demonstrate that the system is bullet proof (test unintended functionality)

Professionalism

1. build
2. ~~test~~