Software System Verification and Validation

Topic Seminar 02 www.cs.ubbcluj.ro/~avescan

Seminar Objectives

Generating test cases based on black box testing

Topics

- **Equivalence partitioning**
- **Boundary value analysis**

Required readings before Seminar 2 (see Books on Teams->General->Files).

- **Testing principles [Mye04]**
- **Testing axioms [Pat05]**

Assignment 1 - 10-minutes - Discussion

Topics

- Testing definition-Strategy-Context-Information Objectives-Domain testing
- Equivalence partitioning (EP) vs. Boundary value analysis (BVA)
- Create test cases based on EP. Example
- Create test cases based on BVA. Example

Assignment 2 – 90 minutes – Black-box testing

1. Specify the given problems (input and preconditions, output and postconditions).
2. Create test cases based on the specification (using equivalence partitioning and boundary value analysis).
3. Implement the test cases using JUnit.

Problems

1) Verify if a number is prime.

2) Compute the maximal sequence of prime numbers from an array of natural numbers. An array X with n components is given.