

Introduction to Software Engineering – laboratory 2

Select 2 exercises from 4 given below.

1. Prepare requirements definition document for e-testing system. The document should contain 2 chapters (5 points):
 - (1) outline of the general purpose of the system (who is the system for, what benefits the system will provide)
 - (2) list of requirements grouped according to requirement types (at least three groups, and at least 20 requirements)

2. Prepare 2 versions of a decision table (limited format, extended format) presenting the tests for the function described below (5 points)

The function has one input (string representing a password), and returns true if password is a strong password, and false – otherwise. Password is strong when: (1) it consists of at least 6 signs, (2) it contains both small and capital letters, (3) it contains at least one number, (4) it contains at least one special character like “!”, “@”, “#”, “\$” or “_”

3. Prepare a **decision table** (in limited and extended version) calculating a discount for a client according to the description (5 points). A new customer who opens a credit card account gets 15% discount for all purchases today. An existing customer with a loyalty card gets 10% discount today. If you have a coupon you can get 20% off today (but this can't be used by new customers). If two discounts are applicable, highest is selected. Discount amounts are added, if applicable.

3. Prepare a **decision tree** for the scenario given below (5 points):

Every employee receives at least 22 days of holidays. Young employees (less than 18) receive 5 extra days. If an employee has at least 25 years of service, 2 extra days are given. These 2 days are also provided for employees of age 45 or more, irrespective of their years of service. Employees with at least 40 years of service and also employees of age 60 or more, receive 3 extra days, on top of the additional days already given.