CS-228, Discrete Structures II
Spring 2008, Section 1

Homework Assignments

NOTE: *Unless stated otherwise, all assigned problems come from the course textbook* (*Susanna S. Epp's "Discrete Mathematics with Applications. Third Edition."*)

Assignment 1:

Counting; Multiplication Rule; Addition Rule:

READING:

Epp's sections 6.1 through 6.3 (pages 297-330).

DELIVERABLE:

Section 6.1: Exercises 2, 3, 5, 7, 9, 11, 13, 16, 18, 21, 28, and 31 (pages 304-306).
Section 6.2: Exercises 1, 3, 4, 6, 8, 9, 11, 19, 21, 24, 31, and 32 (pages 318-320).
Section 6.3: Exercises 1, 3, 4, 6, 9, 11, 12, 14, 24, 28, and 30 (pages 330-333).

Assignment 2:

Combinations; Permutations; Binomial Theorem:

READING:

Epp's sections 6.4 through 6.7 (pages 334-369).

DELIVERABLE:

Section 6.4: Exercises 1, 3, 6, 15, and 19 (pages 347-349).
Section 6.5: Exercises 1, 3, 5, 10, and 11 (pages 355-356).
Section 6.6: Exercises 1, 3, 5, 6, and 9 (pages 361-362).
Section 6.7: Exercises 1, 3, 5, 7, 11, 13, 15, 24, 26, 28, 32, and 34 (pages 369-370).

Assignment 3:

***Expected Value; Conditional Probability; Independence*:**

READING:

Epp's sections 6.8 through 6.9 (pages 362-385).

DELIVERABLE:

Section 6.8: Exercises 1, 2, 4, 7, 14, 16, and 19 (pages 374-375).
Section 6.9: Exercises 1, 4, 5, 10, 13, 16, 18, 21, and 23 (pages 386-388).

Assignment 4:

***Set Identities; Boolean Algebra; and Logic Circuits*:**

READING:

Epp's sections 5.1 through 5.3 (pages 255-290).

DELIVERABLE:

Section 5.1: Exercises 1, 4a,c,d, 5, 6, 7, 8, 9, 16, 23, 26, and 31 (pages 267-269).
Section 5.2: Exercises 8, 10, 11, 12, 15, 16, 18, 19, 23, 25, 27, and 32 (pages 280-282).
Section 5.3: Exercises 1, 3, 5, 6, 9, 11, 13, 14, and 15 (pages 290-293).

Assignment 5:

Introduction to Graphs; Paths and Circuits

READING:

Epp's sections 11.1 and 11.2 (pages 649-662 and 665-679).

DELIVERABLE:

Section 11.1: Exercises 1, 3, 5, 12, 14, 15, 16, 19, 22, and 28 (pages 662-665).
Section 11.2: Exercises 1, 4, 5, and 8 (pages 679-683).

Assignment 6:

Matrix Representation of Graphs, and Isomorphism

READING:

Epp's section s 11.3 and 11.4 (pages 683-695 and 697-703).

DELIVERABLE:

Section 11.3: Exercises 1-10 and 19 (pages 695-697).
Section 11.4: Exercises 1-5, 7, 9, and 11 (pages 703-704_.

Assignment 7:

Trees

READING:

Epp's sections 11.5 and 11.6 (pages 705-721 and 723-731).

DELIVERABLE:

Section 11.5: Exercises 1, 4, 7, 15-20, and 43-47 (pages 721-722).
Section 11.6: Exercises 4, 6, 10, and 11 (pages 732-733).

Assignment 8:

Representation of Integers I

READING:

ABZUG, CHARLES (2008). *Representation of Numbers and Performance of Arithmetic in Digital Computers.* Pages 1-18.

DELIVERABLE:

None

Assignment 9:

Representation of Integers II

READING:

ABZUG, CHARLES (2008). *Representation of Numbers and Performance of Arithmetic in Digital Computers.* Pages 19-28.

Epp's Section 1.5 (pages 57-73).

DELIVERABLE:

Problem Set Number-1 on Positional Number Representation. Do all problems.

Assignment 10:

Representation of Floating-Point Numbers

READING:

ABZUG, CHARLES (2008). *Representation of Numbers and Performance of Arithmetic in Digital Computers.* Pages 29-31.

DELIVERABLE:

Review Questions on Binary Integer Arithmetic. Do all problems.

Assignment 11:

READING:

Epp's Section 12.1 (pages 735-744).

DELIVERABLE:

Review Questions on Floating-Point Number Representation. Do all problems.

Epp's Section 12.1: Exercises 1, 2, 3, 5, 6, 8, 9, 11, and 12 (pages 744-745).