

## Project

Date Due: March , 2026  
Total: 100 marks

---

### Instructions

#### 1. Topics

##### (a) Option 1

Read and prepare a presentation from the textbook.

i. Chapter 6 or 7.

ii. Repeat instructions 2a and 2b for Chapter 8.

##### (b) Option 2

Read and prepare a presentation from other sources (other textbooks, published papers, web – applications, tools, computing standards).

Examples: New grammar types, special parsers, new parsing algorithms, interesting properties of context-free grammars, other tools for compiling, other format representations for compiler compilers, software tools.

##### (c) Option 3

A hot subject of your choice related to ***modern*** compiler design.

#### 2. Requirements

##### (a) Prepare a 25 minute presentation for one of the selected topics (30 marks option 1/60 marks option 2 or 3)

##### (b) Submit a 1-2 page summary of your presentation which highlights the main points covered in your talk. (10 marks)

##### (c) Presentation (30 marks).

### Textbook Topics

#### 1. Chapter 6

##### (a) Intermediate Code Generation

##### (b) Sec. 6.6 Control Flow (Case Statements)

- (c) Sec 6.7 Backpatching & Procedure Calls
- 2. Chapter 7 Run-Time Environments
  - (a) Sec 7.3 Access to Non-local Names & Parameter Passing
- 3. Chapter 8 Code Generation
  - (a) Sec 8.2-8.3 Target Language & Addresses in the Target Code
  - (b) Sec 8.4 Basic Blocks and Flow Graphs
  - (c) Sec 8.5 Optimization of Basic Blocks
  - (d) Sec 8.6-8.7 Code Generator & Peephole Optimization