C Programming

Welcome!!

Please check attendance individually.

(Mobile App)

Professor
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권태덕

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Office Hours: Mon. ~ Thr. (13:00 ~ 17:00)

Major in Computer Science

Samsung Electronics.
Video Display Division
(Advanced Tech.)

Samsung Global R&D Center
@shaghai (Director)

Samsung Electronics.
Manufacturing Process Tech.
(Smart Factory)

C, C++, Python, JS, React Native
Data ETL, Serial bus Tech.

Github for C class

https://github.com/prof-kweon/2025-Fall-C-Language

Students

01 Check Attendance (Phone)

02 Check your info @excel (Email, Korean phone)

03 Create an email (recommendation: gmail) – github, VSC etc.

04 Introducing ourselves

Things to do today

01 Contents of C course to learn during the semester

02 Course evaluation

03 Development environment & setup

04 Make the first program with C

Contents of C course to learn during the semester

Week	Contents
1	Course Description, Development Environment setup
2	Introduction of C, Data type, Operator
3	Statement (Condition, Loop)
4	Standard Input/Output
5~7	Arrays, Structures
8	Midterm exam
9~10	Pointers (Function Pointers, Pointer Operations)
11	File Input/Output
12	Dynamic Memory Allocation
13	Preprocessing, External Variables, Split Compilation
14	Mini Project
15	Final exam

Reference

The C Programming Language 2nd Edition

https://seriouscomputerist.atariverse.com/media/pdf/book/C%20Programming%20Language%20-%202nd%20Edition%20(OCR).pdf

Any book related to C is fine

Course evaluation

Course evaluation	Distribution of points	Note
Attendance	20 points	by school system
Practice May change later!	10 points	Homework
	10 points	Mini Project
	10 points	Contribution & Attitude
Midterm exam	20 points	Write down what you studied on 2 sheets of A4
Final exam	30 points	Open book or Write down what you studied on 2 sheets of A4
Total	**100**	

* Grades are determined based on relative evaluation.

Break time
(Start at 10:00)

Development Environment & setup

Recommended not to use wifi

01 Chrome & Google drive

02 Github

03 IDE (VS code) & **MinGW**

https://code.visualstudio.com/

04 Make the first my program

Development Environment & setup – Github & Git

01 Make an account

02 Create a repository

03 Create two repositories as public
1. for the class practice
2. for homework & project

04 Upload & Download files with github

* How to clone : https://github.com/prof-kweon/2025-Fall-C-Language.git

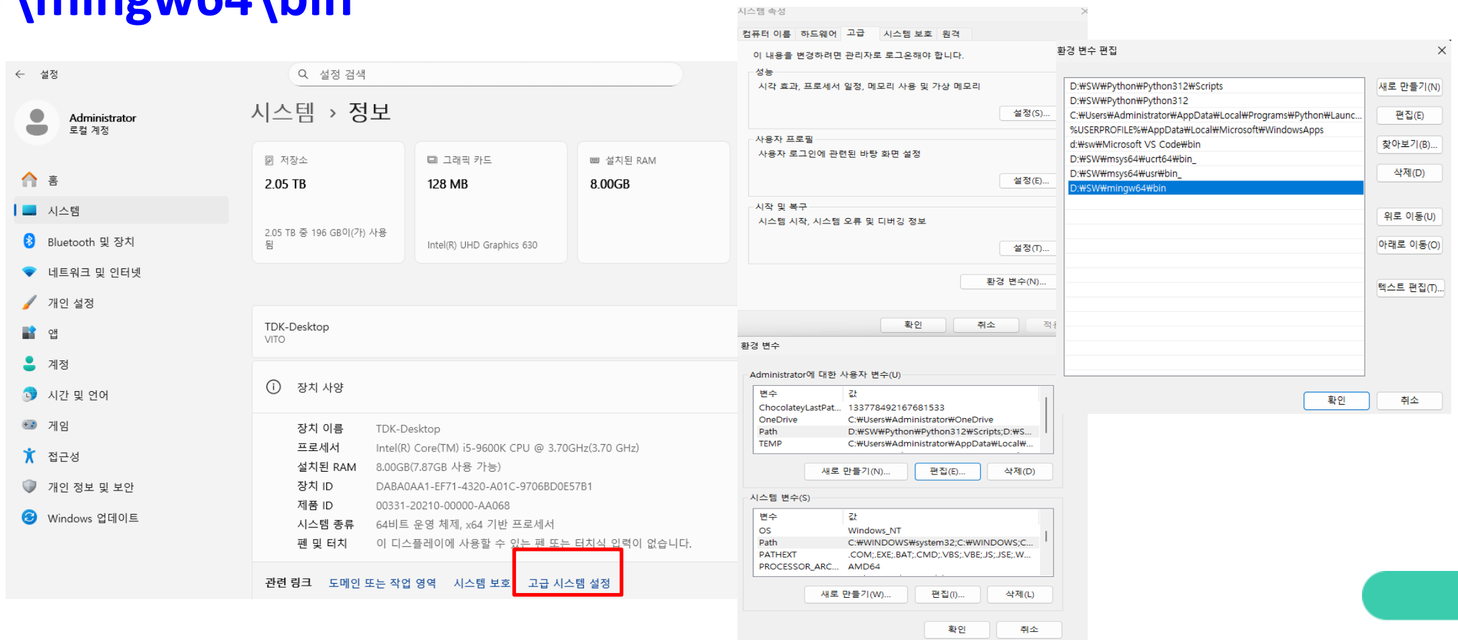
Development Environment & setup – MinGW

01 Doweload MinGW.zip in proper directory
https://drive.google.com/file/d/13XpAmMY30643qQaeEFd5Ye6EhRZWcJdt/view?usp=drive_link

02 “Setting" > “System" > “Information" > “Advance System Setting” > "**Environment** Variables" > "**Path**". and **add** the directory to the end of that string. **“c:\folder\mingw64\bin”**

03 Open a terminal “cmd”

04 Type “gcc –version”



Development Environment & setup – IDE (VSCode)

01 Install VSCode

https://code.visualstudio.com/

02 Connect VSCode & Google drive
Open Folder → Select Google Drive (ex, G:₩)

03 Create main.c
Install C/C++ Extension Pack & Restart C/C++

04 Verify installation → Build your first program
Open “Terminal”

Write the first my program

main.c

```
#include <stdio.h>

int main() {
    printf("Hello world!₩n");
    return 0;
}
```

Build the first my program

Use the -c flag with gcc to compile the source code into an object file without linking.

gcc –c main.c –o main.o => main.o

gcc main.o -o my_program => my_program

If you don’t need an object file and just want an executable, omit the –c flag and use –o flag.

gcc main.c –o my_gragram => my_program

Development Environment & setup – Make the first my program

01 @ windows cmd console

02 @ VSCode (in terminal) – recommend

03 @ Codespaces (after uploading the files in github)

Homework

See you next week!
DO NOT miss the classes

About codyssey

01 What is codyssey

02 Class with codyssey (Requirement, discussion, coding)

03 Homework with Codyssey

04 Peer evaluation & review

https://www.innovationacademy.kr/en/innovation_academy/business_info/codyssey.html

Codyssey Introduction

What is the Codyssey ?

An Innovative SW Education Platform with a "3-No“ Approach

Codyssey is an innovative software education platform designed to address domestic educational needs through a “3-No” approach: No Lecture, No Textbook, No Tuition. By adopting Problem-Based Learning (PBL) and industry-focused projects, it fosters self-directed and collaborative learning to develop field-ready talents for local communities and industries.

Codyssey Overview		
	Educational Features	Problem-Based Learning (PBL) Without Traditional Lectures; Peer Learning and Peer Assessment
	Educational Level	Foundations of Computer Science (Industry-Demand Based Undergraduate Level); Projects (Practical Level)
	Program Duration	Modularized by Technology: Medium- to long-term courses, ranging from 6 to 18 months
	Learning Method	Offline (with Online Support)
	Learning Level	Customized Problem Recommendations Based on Competency

Course structure & method

- Course duration: 15 weeks
- (Codyssey) Problems: 10 sub-courses with 80 problems
  - Essential: 20 problems, Optional: 60 problems
- Course operation:
  - Introductory lectures: 1 ~ 4 weeks
  - PBL classes: 10~13 weeks
  - Examination: 1 week (Open book, Don't memorize, Do understand)
- PBL class operation:
  - Lecture with 1~2 problems solving of the week
  - In-class exercise with 1~2 problems (Team)
  - Assignments with 16 problems, followed by group sharing in the next weeks

Development Environment & setup – Codyssey

01 Check login

https://usr.codyssey.kr/main/

02 Explore menu tree & read a project story

03 Team discussion & Peer evaluation/review

Next week