

**Prerequisites:**

- C programming environment: e.g. Ubuntu Linux, editor (nano, gedit, vi) and gcc for compiling.

**1. “Hello Driver” C kernel program. Implement and submit these 3 files. (3 points)**

- File1: Write a Linux Kernel Loadable Module (KLM) *aka. device driver* (**hello\_driver.c**) that prints “Hello World!” to the *Kernel log (printk)*. You can find this code in your slides. Just type & compile.
- File2: Write a **Makefile** that compiles the driver. Use `lsmod`, `insmod`, `rmmod` commands to install it.
- File3: Use **dmesg** command and take a screenshot of your “Hello” messages in kernel (**dmesg.png**)

**2. Implement a simple game called “What to eat today?” using C language (4 pts + 3 pts)**

- **Motivation:** Some days people living together try to decide what food to order home or dorm room. To avoid this confusion, you decide to turn this situation into a democratic **What2Eat.c** game program.
- **For the first round:** Your program gets the number of people and asks them one-by-one to make 5 choices in order of their preferences (e.g. 1-Kebab, 2-Burger, 3-Pasta, 4-Lahmacun, 5-Salad or others). Your program automatically assigns points to the ordered choices (e.g. Kebab:5, Burger:4 and so on). It calculates the total points and prints a **short list** of preferences that are above a predefined threshold value (e.g. 10). If no choices pass the threshold, you print “You are eating at home/dorm today!” and exit.
- **For the second round:** You ask all players to choose and order their choices **from the short list**. You add the scores again and print them to screen. The food that gets the top point is ordered.
- **Note:** You can choose to “simulate” choices by randomly assigning them from a list, you can print a numbered list of items and ask for numeric choices, or you can read - `scanf()`- any string you like.
- **BONUS (+1 pts):** Adding a GPL license to your code, putting it on Github and providing a link to it in your homework.

**SUBMISSION GUIDE:**

- Create a folder “cs350\_hw1\_studentid” and put all your files in that folder.
- Compress the folder using the following command. Change the student id accordingly.
- **tar -zcvf cs350\_hw1.tar.gz cs350\_hw1\_studentid/**
- Upload this tar.gz file to LMS Homework1.