**Operating Systems Lab**

**Fall 2024**

**Lab Task 06:**

**Understanding RPM/YUM Package Management**

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**Lab Task**

**Note:** Include screenshots, required to illustrate your explanation for all Questions.

**Q1:** Explain the process of compiling a C program in Linux. What command is used to compile the program?

**Q2:** What is the purpose of the -o option in the gcc command? Provide an example.

**Q3:** What is the difference between g++ and gcc? When would you use each?

**Q4:** How do you compile and run a C++ program from the terminal? Provide the necessary commands.

**Q5:** What are templates in C++ in Linux? Write a simple example of a function template.

**Q6:** Discuss the significance of file extensions in C programming. Why should source files be saved with .c or .cpp extensions?

**Q7:** What are the common errors that can occur when compiling C programs, and how can they be resolved?

**Q8:** Explain how you can manage permissions for an executable file in Linux. What command is used for this purpose?

**Q9:** What is a tarball, and what advantages does it offer for distributing software on Linux? Discuss the limitations of using tarballs for software installation and management.

**Q10:** Explain the purpose of the RPM package format and how it addresses the shortcomings of tarballs.