# Topic 1: Basic Concept

## Overview

### Guidance

Operating System Concepts 10th Edition.pdf chapter 1, chapter 20.1-20.3

Advanced Programming in the UNIX Environment, 3rd Edition.pdf 1.6 2.2 2.3

wiki:[History of Unix](https://en.wikipedia.org/wiki/History_of_Unix), [Linux distribution](https://en.wikipedia.org/wiki/Linux_distribution)

### Practice

1. Describe the following concepts

DMA, POSIX, Timer

1. How does the application program using the OS resources? What OS resources are there?
2. What types of operating systems exist? What are their characteristics?
3. What is the relationship between unix and linux? What is the relationship between redhat and linux? What is the defference between linux destribution and linux kernel?
4. What is the relationship between program and process?
5. Operating System Concepts 10th Edition.pdf chapter1 -> Practice Exercises 1.1
6. Operating System Concepts 10th Edition.pdf chapter1 -> Practice Exercises 1.3

## System Call

### Guidance

Operating System Concepts 10th Edition.pdf Chapter 2 System Calls

Advanced Programming in the UNIX Environment, 3rd Edition.pdf 1.11

ioctl dup

ulimit -a, What does these content mean? How to change it

### Practice

Write a program for each type of system call using the function in page 68.

If it can be done early by you, to explore more system calls and put the cases in your programs