**Experiment No: 1**

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| **Student Name and Roll Number:** Piyush Gambhir |
| **Semester /Section:** Semester V – AIML-B (AL-3) |
| **Link to Code:** |
| **Date:** |
| **Faculty Signature:** |
| **Marks:** |

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| **Objective(s):**  To familiarize the students to Linux interface. |
| **Outcome:**   * The students will understand commands used in Linux. |
| **Problem Statement:**  Implement the following things:   * Cygwin Installation * Basic Linux commands |
| **Background Study:**  Cygwin is a open source tool which provides that functionality of the Linux in windows Operating System. Cygwin is a large collection of GNU and Open Source tools which provide functionality similar to a [Linux distribution](https://en.wikipedia.org/wiki/Linux_distribution) on Windows. It is a DLL (cygwin1.dll) which provides substantial POSIX API functionality. |
| **Question Bank:**   1. **What is Linux?**   Linux is an open-source operating system kernel that serves as the core component of various Linux-based operating systems. It was originally developed by Linus Torvalds in 1991 and has since grown into a robust and widely used operating system. Linux is known for its stability, security, flexibility, and customizability. It is used in a wide range of devices, from servers and supercomputers to smartphones and embedded systems.   1. **How will you List files from a directory?**   To list files from a directory in a Linux terminal, you can use the ls command. The basic syntax for listing files is:  ls [options] [directory]   1. **How files in a directory can be removed?**   To remove files in a directory on Linux, you can use the rm command, which stands for "remove." Be cautious when using this command, as it will permanently delete files, and there is no direct way to recover them. The basic syntax is:  ***rm [options] file1 file2 ...***   1. **How to find out a word in a file?**   To find a specific word in a file on Linux, you can use the grep command. The grep command is used to search for text patterns within files. The basic syntax is:  ***grep "word" filename***  Here, "word" is the word you want to search for, and filename is the name of the file in which you want to search for the word.   1. **What are wildcards?**   Wildcards are special characters used in Linux shell commands to represent patterns of filenames or directories. They allow you to perform actions on multiple files or directories that match a certain pattern. Common wildcards include \* (asterisk) for representing zero or more characters, ? (question mark) for representing a single character, [ ] (square brackets) for representing a range of characters, and { } (curly braces) for grouping patterns together. Wildcards are especially useful when combined with commands like ls, cp, mv, and rm to perform actions on multiple files at once based on specific patterns. |

**Student Work Area**

**Algorithm/Flowchart/Code/Sample Outputs**