**CSE 3033 PROJECT 2  
  
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Definition of Project:** In this Project, we are desinging and implementing Shell. Shell is some kind of interface between Kernel and User, and we are coding it with C.   
  
**Spesifications:**

**Part**

## USE of execv instead of others. ✓

## Using fork() & exec() ✓

## Reading PATH, using PATH. ✓

## Adding/removing PATH ✓

## Implementing without system() function ✓

## B) Part

## - Support of built in commands ✓

## Using own history() function ✓

## History with index ✓

## ^z and ^d to stop program ✓

## Retrieve command from history with index ✓

## The Struggles we faced:

## To implement execv, we needed path of the command, so we needed to getenv PATH’s value. But we did’nt wanted to easy way and coded our own findpath function which finds recursively.

## To keep record, and maintain it even close the program: We recorded our history to a log file, and we loaded it every start of the program. Also we decided to use array to manipulate history, because there were only 10 command neded as Project Manager expected.

## Retrieve spesific numbered command: To manage it, we used strstr built in function of C, which returns true if some string contains some string inside it. We basicaly made 10 if statement to check it.

## Manipulating Path: This was one of the struggles, we used struct to keep our paths and also manipulate them. More explanation about code, you can find in comments. Also the execution time screenshots below.

## Screenshots from execution: 1- ls command with -l option:

## ekran görüntüsü içeren bir resim Açıklama otomatik olarak oluşturuldu

## 2- Simple echo command and simple script:

## ekran görüntüsü içeren bir resim Açıklama otomatik olarak oluşturuldu

## 3- mkdir, rmdir commands:

## ekran görüntüsü, siyah içeren bir resim Açıklama otomatik olarak oluşturuldu

**4- History command and indexed retrieve commands:**

ekran görüntüsü içeren bir resim

Açıklama otomatik olarak oluşturuldu

**5- Path and adding path:**

