Iran University of Science & Technology

**Operating Systems**
Fall 2020



# #1 Assignment - Assembly

## Part 1

Clone the repository https://github.com/os-course/iustfall20. Try to load and boot the examples as we have done in class. Note that use VirtualBox as a Virtual Machine tool for running the generated ISO file. Make sure all the examples successfully executed.

```
$ clone https://github.com/os-course/iustfall20
$ cd iustfall20/01_bootloader
$ chmod +x generate_iso.sh
$ ./generate_iso.sh file_name.asm
```

## Part 2

Add a function to move the cursor of the screen to the head of the next line. Name the function `print_newline` You might use 2 special characters. Their hex value is **0x0A** and **0x0D**.

## Part 3

Add a new label to the `printer.asm` file named `print_hex`. This will be used as the function to print **hexadecimal** numbers in the main file. Note that you might need to use `and`, `shr`, `shl`, and `dec` CPU instructions. To test your implementation, put a hexadecimal number into an address of memory. Then `print_hex` the number in that address.

```
; Example of a test for the print_hex function
mov dx, 0xA91F
call print_hex
; The result should be 0xA91F
```

## Deadline

- **Friday** 9th Oct. 23:00

## Submission

Submit just a zip file in LMS. The file should be named as [ `9752xxxx.zip` ]. For example `97521234.zip` .

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