

## **Naming the file: 20BCE1798 ANSH GOEL EX-3 BOOT LOADER PROGRAM**

Reg No: 20BCE1798  
Name: ANSH GOEL

Course Code: CSE2005  
Course Name: Operating Systems (Embedded Lab)

Slot: L27+L28

Ex No 3: Boot\_Loader\_Prg  
Date: 28-01-22

### **Ex 3 - Boot Loader**

Due 3 February 2022 23:59

#### **Instructions**

Print A and Hello as 2 different codes with step by step screenshots for one code. Follow upload format.

## **CODE: - For printing 'A'**

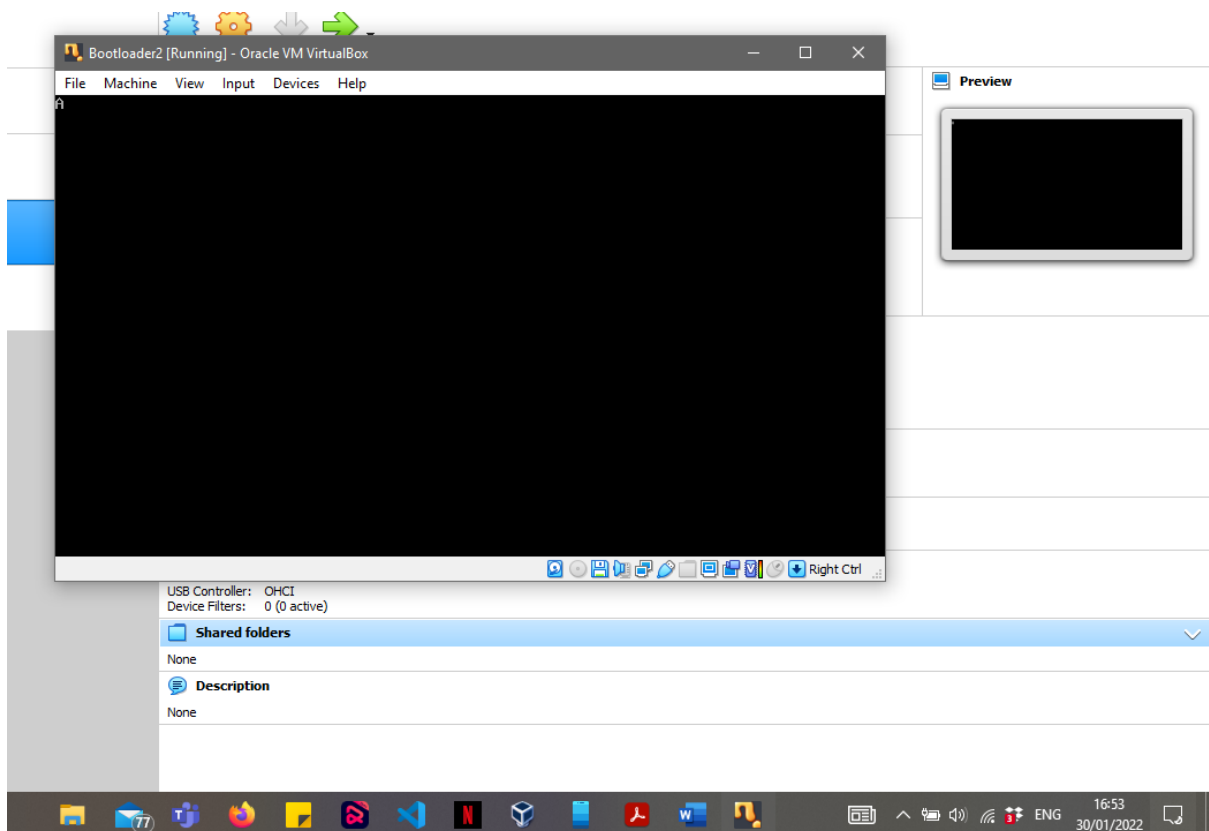
```
Open ▼ ↵
1 [BITS 16];
2 [ORG 0x7C00];
3 MOV AL,65;
4 CALL PrintCharacter;
5 JMP $;
6
7 PrintCharacter;;
8 MOV AH, 0x0E;
9 MOV BH, 0x00;
10 MOV BL, 0x07;
11
12 INT 0x10;
13 RET;
14 |
15 TIMES 510 - ($-$$) db 0;
16 DW 0xAA55;
```

The screenshot shows a text editor window titled 'bootloader2.asm'. The code is written in assembly language and includes comments. The code is as follows:

```
1 [BITS 16];
2 [ORG 0x7C00];
3 MOV AL,65;
4 CALL PrintCharacter;
5 JMP $;
6
7 PrintCharacter;;
8 MOV AH, 0xE;
9 MOV BH, 0x0;
10 MOV BL, 0x07;
11
12 INT 0x10;
13 RET;
14
15 TIMES 510 - ($-$) db 0;
16 DW 0xAA55;
```

The editor's status bar at the bottom indicates 'Plain Text', 'Tab Width: 8', 'Ln 14, Col 1', and 'INS'.

## OUTPUT:



## CODE: For Printing 'Hello World'

```
Activities Text Editor
Open [New]

1 [BITS 16];
2 [ORG 0x7C00];
3 MOV SI,HelloString;
4 CALL PrintString;
5 JMP $;
6
7 PrintCharacter;;
8 MOV AH, 0x0E;
9 MOV BH, 0x00;
10 MOV BL, 0x07;
11
12 INT 0x10;
13 RET;
14
15 PrintString;;
16
17 next_character;;
18 MOV AL,[SI]
19 INC SI
20 OR AL,AL
21 JZ exit_function;
22 CALL PrintCharacter;
23 JMP next_character
24 exit_function;;
25 RET;
26
27 ;Data
28 HelloString db 'Hello World',0;
29
30 TIMES 510 - ($-$$) db 0;
31 DW 0xAA55;
```

Activities Text Editor Jan 30 16:51

\*bootloader3.asm Save [Menu] [Close]

```
1 [BITS 16];
2 [ORG 0x7C00];
3 MOV SI,HelloString;
4 CALL PrintString;
5 JMP $;
6
7 PrintCharacter;;
8 MOV AH, 0x0E;
9 MOV BH, 0x00;
10 MOV BL, 0x07;
11
12 INT 0x10;
13 RET;
14
15 PrintString;;
16
17 next_character;;
18 MOV AL,[SI]
19 INC SI
20 OR AL,AL
21 JZ exit_function;
22 CALL PrintCharacter;
23 JMP next_character
24 exit_function;;
25 RET;
26
27 ;Data
28 HelloString db 'Hello World',0;
29
30 TIMES 510 - ($-$$) db 0;
31 DW 0xAA55;
```

Plain Text Tab Width: 8 Ln 31, Col 11 INS

Windows taskbar: 16:51 30/01/2022

## OUTPUT:

