

Ques

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17/eng02/057  
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### Question 1

- 1) The addresses used to code instruction would have to be updated whenever new variables were inserted before existing ones

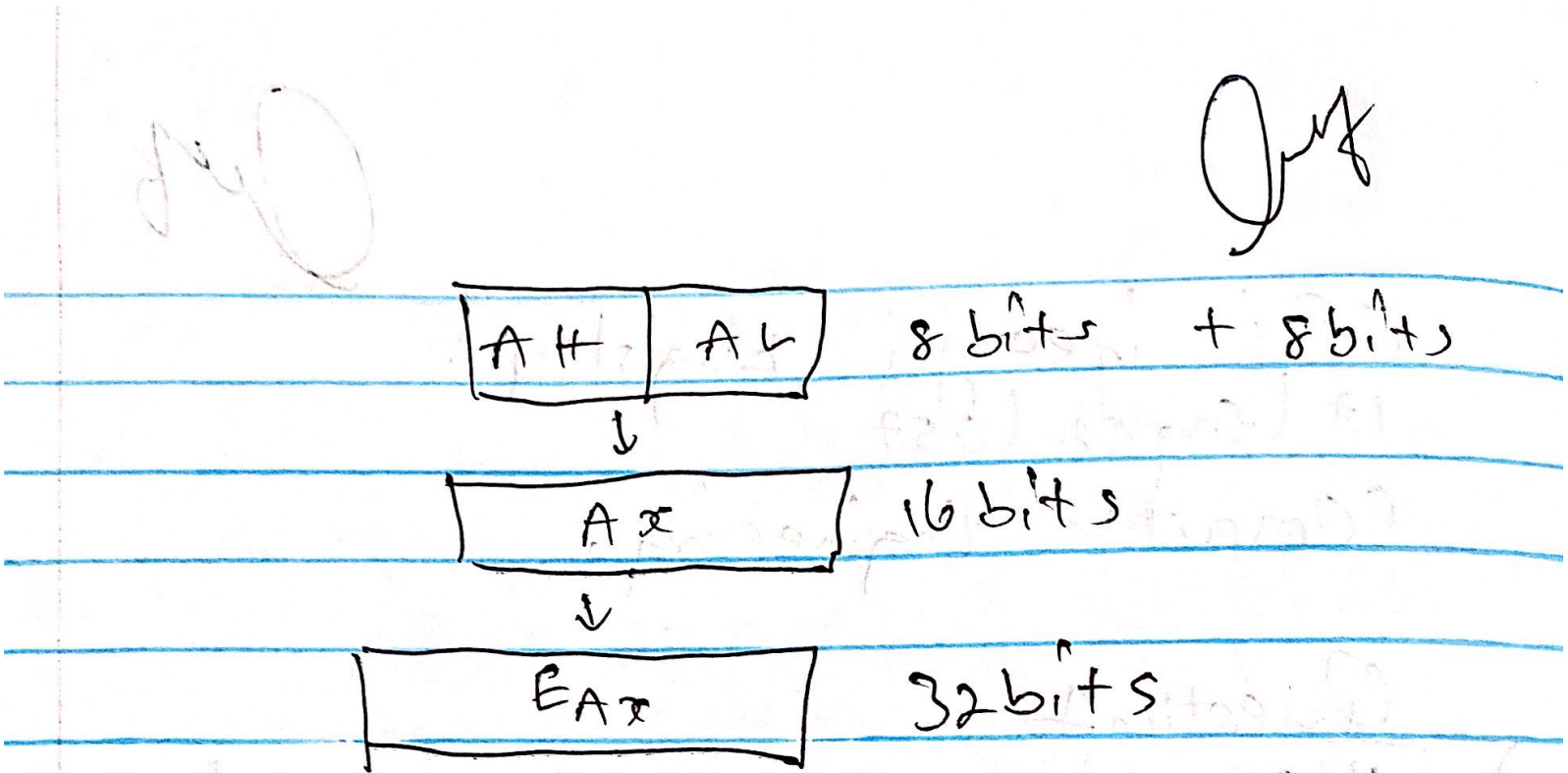
1b Object files and listing files

### Question 2

Programs should be portable from a machine to another. The language used should be absolute and leave no flexibility to the compiler.

b No it is not each assembly language is based on a specific computer.

c The EAX register is used for arithmetic and logical operations. It is a 32 bit register divided into 16 bit registers named AX - also divided into AH and AL



Handwritten notes in red ink at the bottom of the diagram, including the number **6.925** and other illegible characters.

## Question 3

Out

a Segmentation in assembly language is achieved by loading segmented processes into different non-contiguous addressed spaces in memory.

b Main Proc

It is also called the function it is the marker the start of a function.

`MOV AX, 47104`

It moves 47104 into the AX register.

~~`MOV ADD`~~

`ADD EAX, 1270`

It add the hex decimal 1270 into where the EAX registers if a value is there it will give the sum.

`MOV DS, AX`

It moves the AX register into the DS register.

main END P

It marks the end of a file.

Value 1 BYTE 0DH

C The code d: This code declares a variable name value 1 and data type of byte which contains 0DH

10 Value 2 Dword: This line declares a variable value 2 on a double data type which is unassigned.

100 Value 3 5 Bytes -10, -20, -30, -40, -50  
This declares a variable called value 3 assigned to a byte data type with value -10, -20, -30, -40, -50

```
INCLUDE Irvine32.inc
```

```
.data
```

```
Var1 DWORD 10000h
```

```
Var2 DWORD 40000h
```

```
Var3 DWORD 20000h
```

```
finalVar DWORD ?
```

```
.code
```

```
main PROC
```