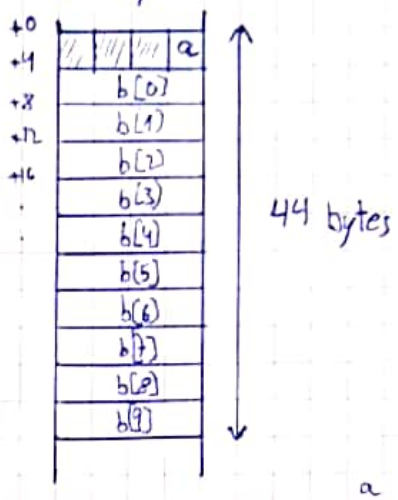
AC Problemas Sesión 3 : 2.9, 2.10, 2.14

2.9

```
typedef struct{
    char a;
    int b[10];
}elem;
elem s[100];
```

a)



%ebx = @s
%esi = i
%edi = j
%dl = x

b) s[i].b[j] → @s + 44·i + 4 + 4·j

```
leal
addl (%ebx,%esi,44),%ecx   // s[i] ecx: @s[i]
addl 4(%ecx,%edi,4),%ecx   // s[i].b[j]
```

c) x = s[s[i].b[j]].a ;

```
xorl %ecx,%ecx
leal (%ebx,%esi,44),%ecx
addl 4(%ecx,%edi,4),%ecx
addl (%ebx,%ecx,44),%ecx
movb (%ecx),%dl
```

AC Problemas Sesión 3

2.10

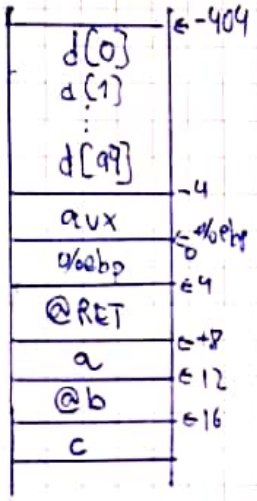
```
int calcula (int M[10][10], int m, int n){
    int i, suma, fila;
    suma=0;
    fila=0;
    for(i=m; i<n; i++)
        suma += Normaliza(M[fila][i], &fila);
    return (suma+1);
}
```


```
calcula: pushl  %ebp
         movl   %esp, %ebp
         subl   $12, %esp
         pushl  %ebx
         movl   $0, -8(%ebp)
         movl   $0, -4(%ebp)
         movl   -12(%ebp), %ebx
for:     cmpl   16(%ebp), %ebx
         jge    fi
         leal   -4(%ebp), %eax
         pushl  %eax
         movl   (%eax), %eax
         imull  $10, %eax
         addl   %ebx, %eax
         movl   8(%ebp), %edx
         movl   (%edx, %eax, 4), %edx
         pushl  %edx
         call   Normaliza
         addl   $8, %esp
         addl   %eax, -8(%ebp)
         incl   %ebx
         jmp    for
fi:      movl   -8(%ebp), %eax
         incl   %eax
         popl   %ebx
         movl   %ebp, %esp
         popl   %ebp
         ret
```

AC Problemas Sesión 3

2.14

a)



b)
```
leal  -4(%ebp),%eax
leal  -404(%ebp),%ecx
pushl %eax
pushl %ecx
pushl $0
call  examen
```

c)
```
      movl  $0,%edx
for:  cmpl  $100,%edx
      jge   fi
      leal  -404(%ebp),%eax
      movl  (%eax,%edx,4),%ecx
      movl  12(%ebp),%eax
      movl  %ecx,(%eax,%edx,4)
      incl  %edx
      jmp   for
fi:
```

d)
```
pushl 16(%ebp)
pushl 12(%ebp)
pushl 8(%ebp)
call  examen
```