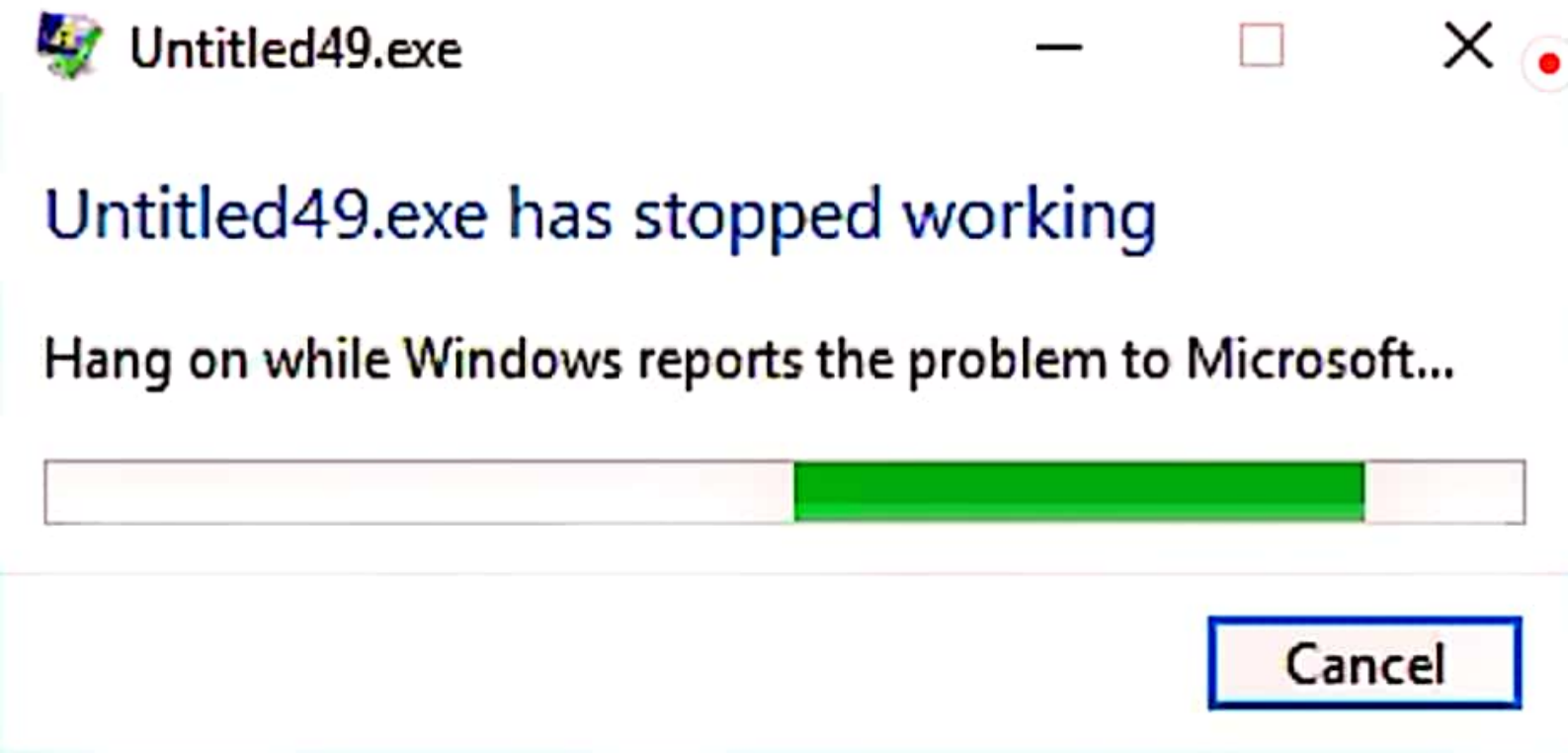
main | 100000000 | Go

```c
#include <stdio.h>
int main()
{
    int a[100000000];
    return 0;
}
```

uments\C-Free\Temp\Untitled49.c:6:2: warning: no newline at end of file

9. 0 error(s), 1 warning(s)
e\Documents\C-Free\Temp\Untitled49.exe

Insert Line ANSI DOS Modified: 14-Sep-20, 10:57:18 Ln: 62


Untitled49.exe
Untitled49.exe has stopped working
Hang on while Windows reports the problem to Microsoft...
Cancel

main | 100000000000 | Go

```c
#include <stdio.h>
int main()
{
    int a[100000000000];
    return 0;
}
```

e\Documents\C-Free\Temp\Untitled49.c...

main | 100000000000 | Go

```c
#include <stdio.h>
int main()
{
    //int a[100000000000];
    int *p;

    p = (int*) malloc( sizeof(int)*100000000000);

    return 0;
}
```

uments\C-Free\Temp\Untitled49.c:7: warning: large integer implicitly truncated to unsigned type

9. 0 error(s), 2 warning(s)
e\Documents\C-Free\Temp\Untitled49.exe

Insert Line ANSI DOS Modified: 14-Sep-20, 10:59:20 Ln: 139

int *P < named loc [stack]
unnamed loc {Heap}

int .

top

Structure pointer

The structure pointer operator -> is used to access members of a structure via a pointer.

-> is typed on the keyboard as a minus sign followed by a greater than sign.

If a pointer variable is assigned the address of a structure, then a member of the structure can be accessed by:

```
pointer-to-structure -> member_name
```

An equivalent construct is:

```
(*pointer_to_structure).member_name
```

Examples of the Two Accessing Modes

Declarations and Assignments

```
struct student temp, *p = &temp;
temp.grade = 'A';
temp.last_name = "Superman";
temp.student_id = 51;
```

Expression	Equivalent Expression	Conceptual Value
temp.grade	p -> grade	A
temp.last_name	p -> last_name	Superman
temp.student_id	p -> student_id	51
(*p).student_id	p -> student_id	51

Examples of the Two Accessing Modes

Declarations and Assignments

int a, *p = &a;

```
struct student temp, *p = &temp;
temp.grade = 'A';
temp.last_name = "Superman";
temp.student_id = 51;
```

Expression	Equivalent Expression	Conceptual Value
temp.grade	p -> grade	A
temp.last_name	p -> last_name	Superman
temp.student_id	p -> student_id	51
(*p).student_id	p -> student_id	51

Dynamic Memory Allocation

Data type integer is predefined

```
int  *p;
p = (int *)malloc( sizeof(int) );
```

4

```
struct one
{
        int a;
};

struct one *p;
p =(struct one *)malloc(sizeof(struct one));
```

4

Dynamic Memory Allocation

Data type integer is predefined

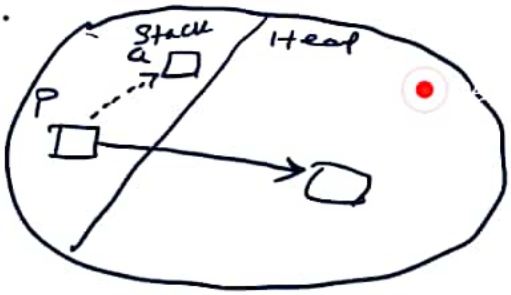
```
int  *p;
p = (int *)malloc( sizeof(int) );
*p=10;
```

Stack Heap

pointer → 10

```
struct one
{
        int a;
};

struct one *p;
p =(struct one *)malloc(sizeof(struct one));
p->a=10;
```



pointer → 10

Dynamic Memory Allocation

Exclusive: SRM KTR

Data type integer is predefined

```
int  *p;
p = (int *)malloc( sizeof(i
*p=10;
```

Stack

Heap

pointer → 10

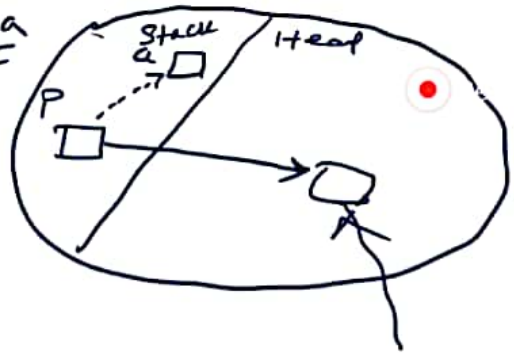
data

Zoom

```
struct one
{
        int a;

ruct one *p;
=(struct one *)malloc(sizeof(struct one));
```

p=&a



pointer → 10

data

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Laser Pointer
Pen
Highlighter
Ink Color
Eraser
Erase All Ink on Slide
Arrow Options

one.b

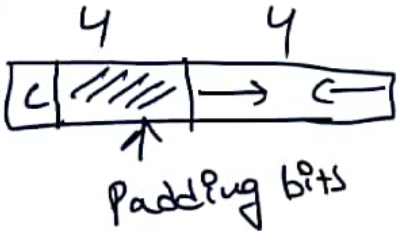
```c
#include <stdio.h>

struct one
{
    char a;
    int b;
}x;

int main()
{
    printf("%d\n", sizeof(x));
    return 0;
}
```

```
struct one
{
        char c;
        int a;
};
```

— sizeof(?)



one.c

```c
#include <stdio.h>

struct one
{
    char c;
    char a;
    int b;
}x;

int main()
{
    printf("%d\n", sizeof(x));
    return 0;
```

"C:\Users\home\Documents\C-Free\Temp\Untitled49.exe"

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```
Press any key to continue . . .
```

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"C:\Users\home\Documents\C-Free\Temp\Untitled49.exe"

)12

Zoom

Press any key to continue . . .

Unmute Start Video Share Participants More

one.c

```c
#include <stdio.h>

struct one
{
    char a;
    int b;
    char c;
}x;

int main()
{
    printf("%d\n", sizeof(x));
    return 0;
```

Documents\C-Free\Temp\Untitled49.c...

0 error(s), 0 warning(s)
Documents\C-Free\Temp\Untitled49.exe

"C:\Users\home\Documents\C-Free\Temp\Untitled49.exe"

Zoom

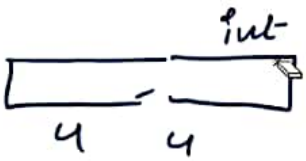
```
Press any key to continue . . .
```

Unmute Start Video Share Participants More

union one | union | Go

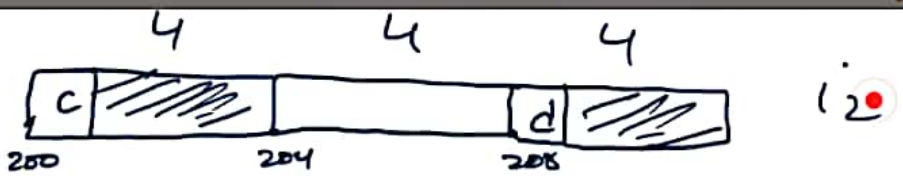
```c
#include <stdio.h>

union one
{
    char a;
    int b;
    char c;
}x;

int main()
{
    printf("%d\n", sizeof(x));
    return 0;
```

```
struct one
{
        char c;
        int a;
        char d;
};
```



= 8.

```
struct one
{
        char c;
        int a;
        char d;
};
```



```
{
    char c;
    int a;
};
```

double
char } → 1c

```
struct one
{
        char c;
        int a;
};
```

Union

last qualification

X - int

XII - int

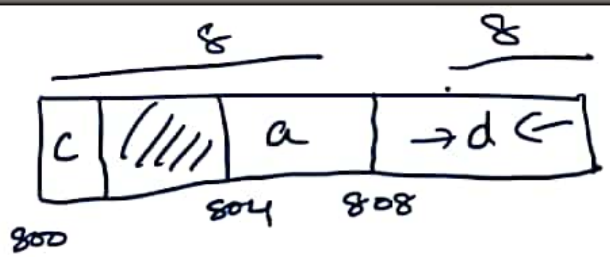
UG - int

PG -

DOC -

Post -

```
struct one
{
        char c;
        int a;
};      double d;
```



Dynamic Memory Allocation


```
struct one
{
        char c;
        int a;
};
```

```
struct one *p;
p = (struct one *) malloc(sizeof(struct one));
```

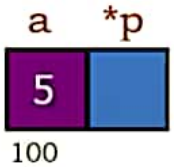
```
p->c='c';
p->a=10;
```

C	10

Dynamic Memory Allocation


```
struct one
{
        int a;
        int *p;
}*x;
```

```
int main()
{
        x = (struct one*) malloc(sizeof(struct one));

        x->a=5;
```



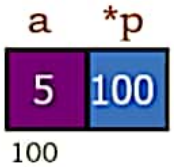
x->p = [ ]

addr of int loc

```
struct one
{
        int a;
        int *p;
}*x;
```

```
int main()
{
        x = (struct one*) malloc(sizeof(struct one));

        x->a=5;
        x->p=&(x->a);

        printf("%u %d\n",x->p,*(x->p));
```

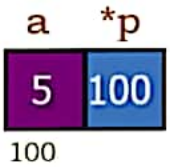
%p → Hex with prec



Dynamic Memory Allocation


```
struct one
{
        int a;
        int *p;
}*x;
```

```
int main()
{
        x = (struct one*) malloc(sizeof(struct one));

        x->a=5;
        x->p=&(x->a);

        printf("%u %d\n",x->p,*(x->p));
```



Dynamic Memory Allocation

Zoom

Exclusive: SRM KTR

```
struct one
{
        int a;
        int *p;
}*x;
```

```
int main()
{
        x = (struct one*) malloc(sizeof(struct one));

        x->a=5;
        x->p=&(x->a);

        printf("%u %d\r...x->p));
        return 0;
}
```

%d", *x)

*x

a	*p
5	100

→ 100

1 2 - - -

*a

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Pause
End Show

Dynamic Memory Allocation


```
struct one
{
        int a;
        int *p;
}*x;
```

Struct one
{
int a; → 4
char c; → 1
Struct one z; ?
}x;

Data Size

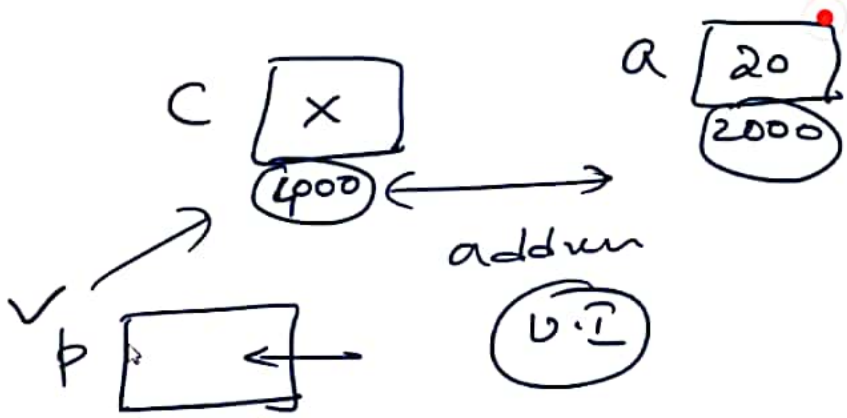
```
struct one
{
    int a;
    struct one *p;
}*x;
```

4

4

char c = 'x'

int a = 20;



```
struct one
{
    int a;
    struct one *p;
}*x;
```

```
int main()
{
    x = (struct one*) malloc(sizeof(struct one));

    x->a=5;
    x->p=x;
```

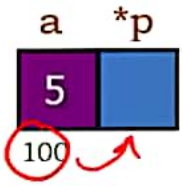
x -> p = x

add of struct

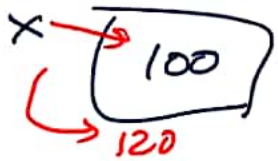
x -> p

int

add of int



struct



```
struct one
{
    int a;
    struct one *p;
}*x;
```

U.I 4

sizeof(int*)
(char*)
(void*)
(double*)

Dynamic Memory Allocation

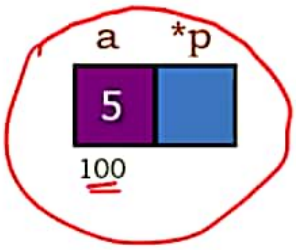
Zoom

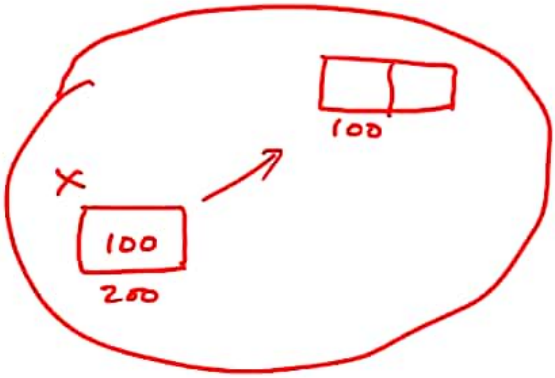
Exclusive: SRM KTR

```
struct one
{
    int a;
    struct one *p;
}*x;
```

```
int main()
{
        x = (struct one*) malloc(sizeof(struct one));

        x->a=5;
```





?

x->P =

Dynamic Memory Allocation

Exclusive: SRM KTR

```
struct one
{
    int a;
    struct one *p;
}*x;
```

```
int main()
{
    x = (struct one*) malloc(sizeof(struct one));

    x->a=5;
    x->p=x;
```

a	*p
5	100

100

?

x->p = x

&x