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Friday
084-281, Week 12

MARCH

pointers

25-03-2011

M	T	W	T	F	S	S
*	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	*	*	*

pointer is similar to a variable which store memory location or memory address. pointer save the memory space. pointer provide dynamic memory management. It increase the execution speed and reduce the program execution. It returns more than one value from a function. It is used to create complex data structure such as linked list, doubly linked list, tree and graph.

Example:

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int i;
    int *p;

    printf("Enter a value");
    scanf("%d", &i);

    p = &i;
    printf("%d", *p);
    printf("%d", *p);
    getch();
}
```

Q: Swapping of two nos by using pointer.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a, b, c;
    int *x, *y;
    clrscr();
    printf("Enter two nos");
    scanf("%d %d", &a, &b);

    x = &a;
    y = &b;

    c = *x;
    *x = *y;
    *y = c;

    printf("%d %d", *x, *y);
    getch();
}
```

Appointments Meetings

Array of pointer:

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a = 30, b = 35, c = 25, d = 20, n;

    int *p[4];
    p[0] = &a;
    p[1] = &b;
    p[2] = &c;
    p[3] = &d;

    for (n = 0; n < 4; n++)
        printf("v.d", *p[n]);

    getch();
}
```

M	T	W	T	F	S	S
.	.	.	.	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	.

29-03-2011

Tuesday
088-277 • Week 13

MARCH

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```

#include <stdio.h>
#include <conio.h>
void main()
{
    int x[4];
    int *p[4];
    int i;
    clrscr();

    printf "Enter four nos ";
    for(i=0; i<5; i++)
        scanf "%d", &x[i]);

    for(i=0; i<5; i++)
        p[i] = &x[i];

    for(i=0; i<5; i++)
        printf "%d", *p[i]);

    getch();
}

```

Appointments Meetings

<stdio.h> includes
<conio.h> includes
void main()

int x = 150;

int *p = &x;

*p = 150

*p = 150

printf "%d", *p[i]);

getch();

pointer to a pointer:

When a pointer variable points to another pointer variable ^{Meetings} is called pointer to a pointer. A pointer to a pointer is also known as chain of pointer. It is declare with:

```
data_type ** ptr;
```

Example:

```
int ** x;
```

Example:

```
#include <stdio.h>
```

```
#include <conio.h>
```

```
void main()
```

```
{
```

```
int x = 120;
```

```
int *p, **s;
```

```
p = &x;
```

```
s = &p;
```

```
printf "y.d y.d", *p, **s);
```

```
getch();
```

```
}
```

OUTPUT: 120 120