Επανάληψη και παράδειγματα

```
#include <stdio.h>

int squ(int);

int
main( ) /* This is the main program */
{
      int x,y;
      for(x = 0;x < 7;x++)
      {
            y = squ(x); /* go get the value of x*x */
            printf("The square of %d is %d\n",x,y);
      }
      for (x = 0;x <= 7;++x)
            printf("The value of %d is %d\n",x,squ(x));
}

int
```

```
squ(int in) /* function to get the value of in squared */
{
	int square;
	square = in * in;
	return square; /* This sets squ() = square */
}

int
main()
{
	int x, y, value, i;

	printf(“Dwse thn bash: “)
	scanf(“%d”, &x);
	printf(“Dwse ton ektheti: “);
	scanf(“%d”, &y);

	value = 1;
	for (i = 0; i < y; i++)
		value = value * x;
```

```
    printf("%d eis thn %d = %d", x, y, value);
}
```

Αριθμητικές πράξεις

```
int
main( )
{
    int a,b,c; /* Interger variables for examples */
    a = 12;
    b = 3;
    c = a + b; /* simple addition */
    c = a - b; /* simple subtraction */
    c = a * b; /* simple multiplication */
    c = a / b; /* simple addition */
    c = a % b; /* simple modulo (remainder) */
    c = 12*a + b/2 - a*b*2/(a*c + b*2);
    c = c/4+13*(a + b)/3 - a*b + 2*a*a;
    a = a + 1; /* incrementing a variable */
    b = b * 5;
```

```
    a = b = c = 20; /* multiple assignment */
    a = b = c = 12*13/4;
}
```

Εντολές break & continue

```
int
main( )
{
    int xx;
    for(xx = 5;xx < 15;xx = xx + 1)
    {
        if (xx == 8)
            break;
        printf("in the break loop, xx is now %d\n",xx);
    }
    for(xx = 5;xx < 15;xx = xx + 1)
    {
        if (xx == 8)
            continue;
```

```
            printf("In the continue loop, xx is the now %d\n",xx);
        }
}
```

Η εντολή switch

```
int
main( )
{
      int truck;
      for (truck = 3;truck < 13;truck = truck + 1)
      {
            switch (truck)
            {
                  case 3 :
                        printf("The value is three\n");
                  break;
                  case 4 :
                        printf("The value is four\n");
                  break;
```

```
                case 5 :
                case 6 :
                case 7 :
                case 8 :
                        printf("The value is between 5 and 8\n");
                break;
                case 11 :
                         printf("The value is eleven\n");
                break;
                default :
                        printf("It is one of the undefined values\n");
                break;
            } /* end of switch */
        } /* end of the loop */
}
```

Πίνακες χαρακτήρων

```
int
main( )
```

```
{
      char name[5]; /* define a string of characters */
      name[0] = ’D’;
      name[1] = ’a’;
      name[2] = ’v’;
      name[3] = ’e’;
      name[4] = ‘\0’; /* Null character - end of text */
      printf("The name is %s\n",name);
      printf("One letter is %c\n",name[2]);
      printf("Part of the name is %s\n",&name[1]);
}


int
main( )
{
      char name1[12],name2[12],mixed[25];
      char title[20];

      strcpy(name1,"Rosalinda");
```

```
        strcpy(name2,"Zeke");
        strcpy(title,"This is the title.");
        printf(" %s\n\n"title);
        printf("Name 1 is %s\n",name1);
        printf(Name 2 is %s\n",name2);
        if (strcmp(name1,name2)>0) /* return 1 if name1 > name2 */
                strcpy(mixed,name1);
        else
                strcpy(mixed,name2);
        printf("The biggest name alphabetically is %s\n",mixed);
        strcpy(mixed,name1);
        strcat(mixed," ");
        strcat(mixed,name2);
        printf("Both names are %s\n",mixed);
}
```

Πίνακες αριθμών

```
int
main( )
```

```
{
      int values[12];
      int index;
      for (index = 0;index < 12;index++)
            values[index] = 2 * (index + 4);
      for (index = 0;index < 12;index++)
            printf("The value at index = %2d is
      %3d\n",index,values[index]);
}

int
main()
{
      int i,j;
      int big[8][8],huge[25][12];

      for (i = 0;i < 8;i++)
            for (j = 0;j < 8;j++)
                  big[i][j] = i * j; /* This is a multiplication table */
```

```
	for (i = 0;i < 25;i++)
		for (j = 0;j < 12;j++)
			huge[i][j] = i + j; /* This is an addition table */

	big[2][6] = huge[24][10] *22;
	big[2][2] = 5;

	for (i = 0;i < 8;i++)
	{
		for (j = 0;j < 8;j++)
			printf("%5d ",big[i][j]);
		printf("\n"); /* newline for each increase in i */
	}
}

main( )
{
	char big[25];
	printf("Input a character string,up to 25 characters.\n");
	printf("An X in column 1 causes the program to stop.\n");
```

```
    do
    {
        scanf("%s",big);
        printf("The string is -> %s\n",big);
    } while (big[0] !='X');
    printf("End of program.\n");
}
```

Output To A File

```
main( )
{
    FILE *fp;
    char stuff[25];
    int index;

    fp = fopen("TENLINES.TXT","w"); /* open for writing */
    strcpy(stuff,"This is an example line.");

    for (index = 1;index <= 10;index++)
```

```
            fprintf(fp,"%s Line number %d\n",stuff,index);
        fclose(fp); /* close the file before ending program */
}

int
main( )
{
        FILE *funny;
        int c;

        funny = fopen("TENLINES.TXT","r");
        if (funny == NULL)
            printf("File doesn't exist\n");
        else
        {
            do
            {
                c = getc(funny); /* get one character from the file */
                putchar(c); /* display it on the monitor */
            } while (c != EOF); /* repeat until EOF (end of file) */
```

```
            fclose(funny);
        }
}
```