Dos and Don’ts

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Key Points to Remember for Writing Error Free C Programs:

1. C programming is a case sensitive programming language. **Most of the keywords of C-Language are written in lower case (except NULL, FILE).**

   Name of the **identifier** (**not keyword**) may contain upper case.

   Examples:

   int i,N; /* Here **N** is an **identifier** (**not keyword**) */

   char Name[20]; /* Here **Name** is an **identifier** (**not keyword**) */

   FILE *fp;

   int *p=NULL;

2. **Each C programming statement is ended with semicolon (;)** which are referred as **statement terminator**.

   Examples:

printf(“ Ban de mataram.”);

printf(“ Long live revolution.”);

3. **Do not put semicolon (;)**

(i) immediately after any pre-processing statement

[Examples of some common mistakes:
Mistakes are highlighted by **red colour**

#include<stdio.h>; /*It is Wrong*/
#include<stdio.h> /*It is Correct*/

#include”math.h”; /*It is Wrong*/
#include”math.h” /* It is Correct */

#define MAX 10; /*It is Wrong*/
#define MAX 10 /* It is Correct */]

(ii) immediately after any if conditional statement

[Examples of some common mistakes:
Mistakes are highlighted by **red colour**

if (n==0); /*It is wrong as it is equivalent to if (n==0) {}; and the

program control will not be transferred inside the body of the conditional statement.*/
if (n==0)/*It is Correct*/

if (n>=2 && n<=5); /*It is wrong as it is equivalent to if (n>=0 && n<=5) {}; and the program control will not be transferred inside the body of the conditional statement.*/
if (n>=2 && n<=5)/* It is Correct */]

(iii) immediately after any else if conditional statement

[Examples of some common mistakes:
Mistakes are highlighted by **red colour**

else if (n==0); /*It is wrong as it is equivalent to else if (n>=0) {}; and the program control will not be transferred inside the body of the conditional statement.*/
else if (n==0)/*It is Correct*/

else if (n>=2 && n<=5); /*It is wrong as it is equivalent to else if (n>=2 && n<=5) {}; and the program control will

not be transferred inside the body of the conditional statement.*/
else if (n>=2 && n<=5)/* It is Correct */]

(iv) immediately after any else conditional statement

[Examples of some common mistakes:
Mistakes are highlighted by **red colour**

else; /*It is wrong as it is equivalent to else {}; and the program control will not be transferred inside the body of the conditional statement.*/
else /*It is Correct*/]

(v) immediately after any for loop

[Examples of some common mistakes:
Mistakes are highlighted by **red colour**

for(i=0; i<100; i++); /*It is wrong as it is equivalent to for(i=0; i<100; i++){}; and the program control will not be transferred inside the body of the iterative statement.*/
for(i=0; i<100; i++) /*It is Correct*/]

(vi) immediately after any while loop (except do-while loop)

[Examples of some common mistakes:
Mistakes are highlighted by **red colour**

```
while (i<100); /*It is wrong as it is equivalent to while (i<100){}; and the program control will not be transferred inside the body of the iterative statement.*/
while (i<100) /*It is Correct*/]
```

(vii) immediately after any do statement in do-while loop

[Examples of some common mistakes:
Mistakes are highlighted by **red colour**

```
do; /*It is Wrong*/
do /*It is Correct*/]
```

(viii) immediately after any function input argument type declaration in function definition

[Examples of some common mistakes:
Mistakes are highlighted by **red colour**

```
float area_circle( float r);
```

```
{
  return (22/7*r*r);
}
/*It is wrong as it is equivalent to float area_circle( float r){} which is a 'do nothing function' and the program control will not be transferred inside the body of the function.*/

float area_circle( float r)/*It is Correct*/
{
  return (22/7*r*r);
}]
```

4. **It is important to remember that do-while loop must be terminated with a semicolon (;).**

[Examples of some common mistakes:
Mistakes are highlighted by **red colour**

```
int sum_one_to_hundred( )
{
   int S=0,n=1;
     do
     {
       S=S + n;
       n ++;
      }while(n<100) /*It is Wrong. ';' is missing*/
```

```
    return (S);
}

int sum_one_to_hundred( )
{

    int S=0,n=1;
    do
    {
        S=S + n;
        n ++;
     }while(n<100); /*It is Correct*/
  return (S);
}
]
```

Function prototype declaration must be terminated with a semicolon (;).

[Examples of some common mistakes:
Mistakes are highlighted by **red colour**

```
    float area_circle( float ) /*It is Wrong. */
    float area_circle( float ); /*It is Correct. */
]
```

5. **A block containing multiple programming statements** (at least two) under **if**, **else if**, **else**, **switch**, **while**, **for**, **do** must contained within an

opening and closing curly braces (that is between { and }).

Example:

```
int  sum_of_digits (int n)
{
   int  i, d;S=0;
   for (i=n; i>0; i=i/10)
   { /*Beginning of the Block*/
      d=i%10;
      S=S+d;
   } /*Ending of the Block*/

   return (S);
}
```

6. **There must be two semicolons (;)** associated with **for loop.**

[Examples of some common mistakes:
Mistakes are highlighted by **red colour**

```
for(i=0; i<25, i++)/*It is Wrong. */
for(i=0, i<25; i++)/*It is Wrong. */
for(i=0, i<25, i++)/*It is Wrong. */
for(i=0; i<25; i++)/*It is Correct. */
```

]