**Enumeration**(is not derived data type) is a **user** **defined** **datatype** in C language. It is used to **assign names to the integral constants(not float or double)** which makes a program easy to read and maintain.

1. Semicolon after braces only.

2.same structure like structure and union for declaring variable of enumtype:

Example: **enum** hello

{

a,b //no semicolon

};

Main()

{

**enum** hello m; // similar to structure and union

printf("%d",a);

}

3. Enumerated types are not strings. Hence it is not possible to use string handling functions with enumerated data types.

4. Only integer **constants** are allowed in enums.

Example:

#include<stdio.h>

**Enum** sanfoundry

{

a=2,b=3.56 \\ no float value only int type allowed.

};

**Enum** sanfoundry s;

Main()

{

printf("%d%d",a,b);

}

Output: error: enumerator value for ‘b’ is not an integer constant

5.All are int constant means  all enumerator constants should be unique in their scope.

Example:

#include<stdio.h>

**Enum** hi{a,b,c};

**Enum** hello{c,d,e};

Main()

{

**enum** hi h;

h=b;

printf("%d",h);

return 0;

}

Output: error: redeclaration of enumerator ‘c

6. it is possible to use /store the symbol of one enum in another enum variable.

Example”

#include<stdio.h>

**enum** sanfoundry

{

a=1,b

};

**enum** sanfoundry1

{

c,d

};

int main()

{

**enum** sanfoundry1 s1=c;

**enum** sanfoundry1 s=a;

**enum** sanfoundry s2=d;

printf("%d",s);

printf("%d",s1);

printf("%d",s2);

}

Output:101

4. It is not possible to change the value of enum symbols.

Example:

#include<stdio.h>

**enum** sanfoundry

{

a,b,c=5

};

**enum** sanfoundry s;

main()

{

c++;

printf("%d",c);

}

Output:Error

2. #include<stdio.h>

**Enum** hello

{

a,b,c;

};

Main()

{

**enum** hello m;

printf("%d",m);

}

Output: error: bz of semo-colon a,b,c;

#include<stdio.h>

**Enum** colour

{

blue, red, yellow

};

Main()

{

**enum** colour c;

c=yellow;

printf("%d",c);

}

Output: 2

#include<stdio.h>

**Enum** hello

{

a,b,c;

};

Main()

{

**enum** hello m;

printf("%d",m);

}

Output: error: bz of semi-colon a,b,c;

#include<stdio.h>

**Enum** colour

{

blue, red, yellow

};

Main()

{

**enum** colour c;

c=yellow;

printf("%d",c);

}

Output: 2