

TASK 1:- Point out the syntax & semantic error in the code snippet.

Aim: To point out the syntax and semantic errors in the code snippet and debug.

Algorithm:

1. Read the code.
2. Check for semantic error.
3. Check for syntax error.
4. fix the error.
5. Compile and run corrected code.

Code:

1) Point out the semantic error in the code snippet.

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

```
int main()
```

```
{
```

```
int a=10;
```

```
printf("The value of a is: %d", a);
```

```
return;
```

```
}
```

2) point out the syntax errors in the code snippet

Output: 1

The value of a is: 10

variable a is used without declaration.

if ^{int} $a = 10$ then output of $a = 10$

Output: 2

a is greater than 1

if $(a > 1)$ then output is a greater than 1

if $(.)$ is invalid.

Output: 3

The value of b is: 2/1

Division by zero ($2/0$) undefined.

Output: 4

error: invalid $++(x+y)$

output: 7

$z = x+y$

$++z$ then.

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

```
int main()
```

```
{  
  int a=2;
```

```
  if(a>1);
```

```
  printf("a is greater than 1");
```

```
  return 0;
```

```
}
```

3) Point out the syntax error in the snippet.

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

```
int main()
```

```
{  
  int a=2;
```

```
  int b=2/7;
```

```
  printf("The value of b is: %d", b);
```

```
  return 0;
```

```
}
```

4) Find the output of the code.

```
int main()
```

```
{  
  int x=1, y=5;
```

```
  printf("%d", ++(x+y));
```

```
  return
```

```
}
```


Output: 5

$a = 7$

explanation $6 == c$ means $3 == 3$

Output: 6

-1

no errors.

Output: 7

i-+3 invalid syntax

if it = 3

output is 6 10 14 18 22

5) Find the output of the code.

```
int main()
{
    int a=2, b=2, c=3;
    a=b=c;
    printf("a = %d", a);
    return 0;
}
```

6) Find the output of the code

```
int main()
{
    int i=9;
    for (i--; i--; i--);
    printf("%d", i);
    return 0;
}
```

7) Find the output of the code

```
int main()
{
    int i;
    for (i=5; ++i; i+=3)
    printf("%d", i);
    return 0;
}
```

Result: By the above tasks we understood about error detection proper use of expressions and about loop, increments and writing error free C-program.

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TOTAL (15)	10
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