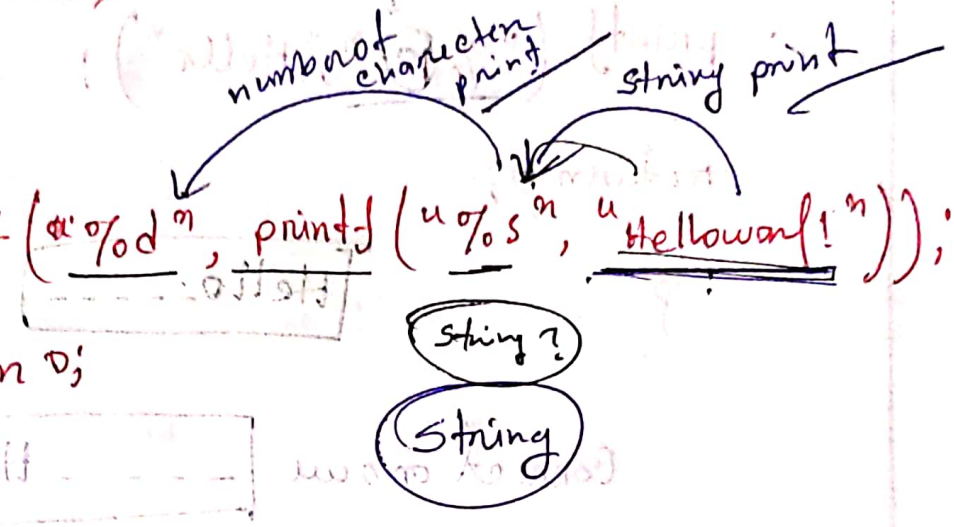
(Video 11) C Programming (Important Question 1)

1. What is the output?

```
#include <stdio.h>
int main()
{
    printf("%d", printf("%s", "Hellow world!"));
    return 0;
}
```



0 connect Answer "Hellow world!12"

→ %s is used to print "string of characters"

→ printf not only print the content on the screen.

It also returns the number of the characters that is succesfully prints on the screen.

Hello World!

12 characters

2.
```c
#include<stdio.h>
int main() {
    printf("%10s","Hello");
    return 0;
}
```

Hello-----

Correct answer: -----Hello

%10s → মানে 10টা character নিবে but এখানে তো 10টা নাই, আছে 5 টা তাই আগে ~~আগে~~ 5টা space input নিবে Then বাকি string টা print করবে।

255+10=265 But Character এর max range ~~256~~ 255

So আবার প্রথম থেকে repeat হবে।

00000000 = 0
00000001 = 1
00000010 = 2
....

3.
```
int main() {
    char c = 255;
    c = c+10;
    print("%d", c);
    return 0;
}
```

265 → [1]00001001 = 9

যেহেতু Character only 8 bit support করে so, প্রথম 1 টা out হয়ে যাবে। বাকি টুকু 9 represent করে

→ c = 255 as a character, not integer

~~10~~

Some character from ASCII

char c = 255;

Character type 1 byte / 8 bit জায়গা নিবে।

255 → 1111 1111 → max value for 8 bit

c = c+10 → c = 265 → 100001001 → 9 digit

but available 8 digit

↓

$\square \bmod 2^n$

$265 \bmod 2^8$

$= 265 \bmod 256$

reminder - 9

print("%d", c)

↓

correct Answer 9

4. which one connect ?

i) signed int i;

ii) signed i;

iii) unsigned i;

iv) long i;

v) long int i;

vi) long long int i;

All are connect

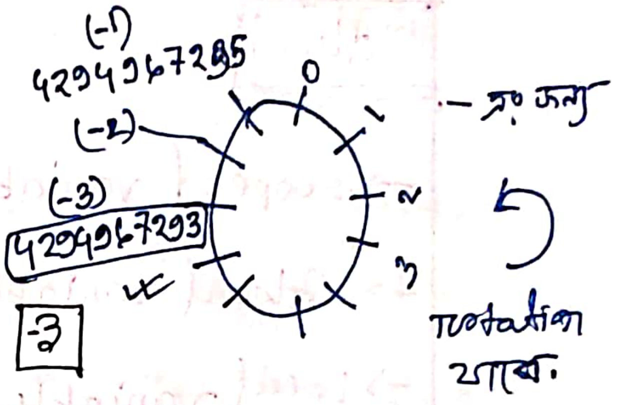
compiler automatically assume, it is integer

so, signed int i and signed i are same

and so the other.

5. int main() {

```
Unsigned i = 1;        1
int j = -4;            -4
printf("%u", i+j);     -3
return 0;
```



→ %d হলে → -3 output আসবে

3.

%u এর জন্য unsigned int হিসেবে count করবে
-3 এর binary represent নিবে। 2nd item থেকে 1,

so, $(2^{32}-1)-2$
$= 4294967293$

Answer

-3 in 2s complement representation:

Step1: Take 1s complement of 3

3 = 00000000 00000000
00000000 00000011

1s complement of 3 = 11111111 11111111
11111111 11111100

Step2: Add 1 to the result.

11111111 11111111 11111111 11111101 = -3

$2^{32}-1 = 4294967295$ 4294967293

10 - 94
11 - 95