Variable → r
Pointer → *r
reference → &r

only for C++

Reference → use for parameter passing

Date
Page 1/11/2021

Reference: Another name given to existing variable

```
int main()
{
    int a = 10;
    int &r = a
    cout << r;  →10
    r++;
    cout << a;  →11
```

Heap

Stack

a/r
10
(Stack memory of program)

main
=
(Code section)

* Reference is not like pointer & it does not consume any memory it uses the same memory of the variable it is initialized (Here r uses memory of a)

* Accessing struct member using pointer.

```
int main()
{
    struct Rectangle r = {10,5}
    struct Rectangle *p = &r
    r.length=15
    (*p).length = 20;  or  p→length=20;
    // accessing structure elements using pointer
```

Creating object variable of type of structure dynamically in heap using pointer
↑ datatype

→ struct rectangle *p;

for C → p = (struct rectangle*)malloc(sizeof(struct Rectangle));

for C++ → p = new Rectangle;

p → length = 10; or (*p).length = 10

p → breath = 5;