Calling fun in a derived class using base class ptr/ref.

(unit-4)

Q) How are fun called using a ptr & using a ref?

A) Functions r called thru ptr using an arrow operator

eg bptr → fun();
↳ (base ptr)

Fun r called thru ref, using . dot operator

eg bref . fun();
↳ (base ref)

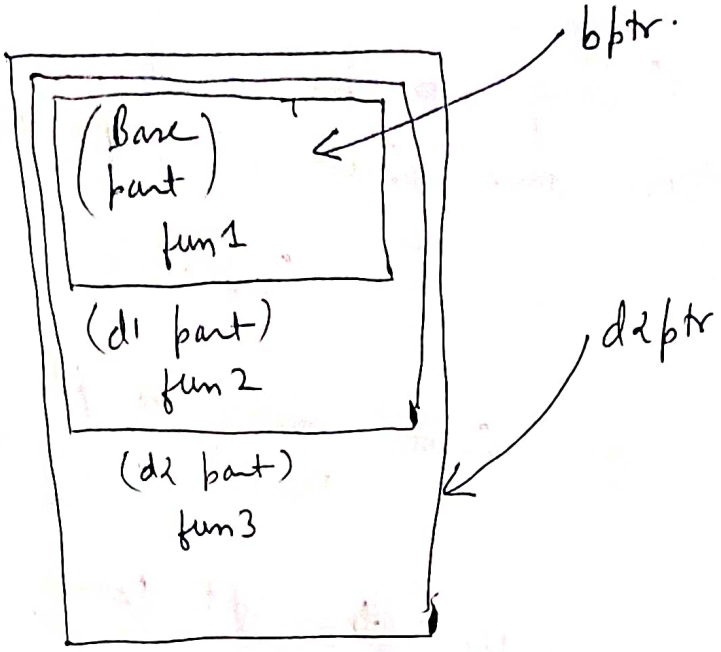
Q) which fun can be called by a baseptr & which fun " " " " in derived class ptr?

A

B fun1 "fun in base"
↓
d1 fun2 "fun in d1"
↓
d2 fun3 "fun in d2"

fun1 } inherited
fun2 }

- Here d2 contains 3 fun, where fun1 & fun2 r inherited.
- Suppose a base class ptr is pointing to d2 obj, then wh. of these fun can be called by the ptr.?



obj of d2

- Suppose a bptr & derived class ptr i.e d2ptr is pointing to this d2 obj.
- bptr can only call fun mth. r in base part means mth. r inherited from base.

  bptr can call only fun1()
  It can't call fun2(), fun3()

- But, d2ptr can call all funs in d2 obj.

  d2ptr can call fun1(), fun2(), fun3();

- For EX-1

Create a bptr & pt. to d2 obj.
This ptr can call only fun1();

```
d2 obj-d2; //Create a d2 obj
base *bptr;
 bptr = &obj-d2; // bptr pt. to d2

bptr -> fun1(); // bptr can call only
                   fun1()

//bptr -> fun2(); // X Not allowed.
//bptr -> fun3(); //   Compiler error.
```

EX-2

Create a d2 ptr & pt. to d2 obj
This ptr. can call all fun in d2.

```
d2 obj-d2;
d2 *d2ptr;
  d2ptr = &obj-d2; // pt. to obj-d2.

d2ptr -> fun1();
d2ptr -> fun2();   } All fun can be called by d2 ptr.
d2ptr -> fun3();
```

- Similar behaviour will be shown by base class references.

Summary

- Base ptr can only call fun wh. r in base class -