Assignment - 21

0.1 why we cannot create the object of such a class which contains pure virtual function in it?

i.e the VTABLE of that class is incomplete so,

our object is also imporplete therefore, we

cannot except the object of class which

has pure virtual function in it.

what is meant by pure virtual function.

- o Pare virtual function is a type of
 virtual function in which the parent | Base
 class has function declaration & initialized
 with zero. | Abstract method.
 - · for eg. return-type function name () = 0;
- declaration is done is Base and the definition is in the devived class.

eg. - class Demo &

9.2

int is

virtual void fun () = 0; // Abstract method

class derived : public pemo

{ public: virtual void fun 1) cout ec " inside fun" ecend1; int main () SON L' 22010 HOUTE ON BIRATE Demo * D = new derived: D -> fun(); return o: - > 1/ Inside Fun what happens if base class has contains virtual -function under private access specificey · As the declaration of virtual function will be in private access specifier so. no one will access virtual function outside the class.

Q.4 what is meant by abstract method
& concrete methods

Q. 3

o The function without body, we can calle it as a abstract method.

Abstract method does not have the function defination.

· eg. -> return-Type Method-name () = 0;

o The function with body we can call it
as a concrete function.
as a concrete function.
return-Type Punction_name ()
5 //
o'in above code tingle level sinhesitance,
See J. Casa
- The Base closs how a pare virtual function
9.5 class Base nup. and to bemen
- one simple virtual Rinetion is also z
public:
Derived days derived all the resources from
Base of this derived day't this defined pure
virtual void sun() = 0;
viytual void sun() = 0;
or browvirtual world run () { who show the
codo la socoutace " Base Run" 30
object of pale will generated & gris
VPTR points the NTABLE of base class of his
class derived : public Base
Public: 1900 1 1900
State State
double di
Bods
void sun ()
{ cout << " Derived san";
3 . shall and to toanscare
void fun ()
{ cout << " perived fun";
3

(void gun ())

f cout << " perived gun";

y

- -> o in above code single level inhesitance is
 - The Base class has 2 pare virtual functions named as sun, gun.
 - one simple virtual function is also present in Base class, i.e yun.
 - Derived class derived all the resources from

 Base & this derived class has defined pure

 virtual functions in it.
 - · As base class has virtual keyword the

 VPTR OF 4 bytes will be created when

 object of base will created & this

 VPTR points to VTABLE of base class which

 contain dirtual function.

 bobj:

 VTABLE

VPTR 500 500 7 9 4011 108 8040:: f 84011

o The derived class will have all the resources of the base.

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	VTABLE			
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class Base	()	ot main		
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public:				
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{ cout << " Base t	Fun'';			
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virtual void gur	1) 1/2	000	box	
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class derived : pur	blic Bake	restred		
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	d	٥				

```
9.7
           class base 1
        & public :
                   int i's
                   float f;
                  virtual void gun () = 0;
virtual void sun () = 0;
                  virtual void run() 1/2000
                   53
          class base 2
               public:
                   int i;
                   float &:
               virtual void munis = 0;
               virtual void Aun () = 0;
               void fun () 1/2000
                  23
        3:
        class derived : public bases, bases
               public :
                  int i;
                  double d:
                 void sun() 53 1/3000
                  void Fun() { 3 11 4000
                  void gun () {3 115000 void mun () {3 116000
     3:
```

// 1000

int main () des de la la todas

derived doby;

THE 1635 CARDACK THAT SIL

return o;

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VPTR	200	>	gunes
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The same of				

Q.8 what are ways in which we can achieve apeasting in object oriented language? o upcasting: if a pointer having the less capacity that it points to a large capacity data then it is called as upcasting. 1. Statically: creating the pointer of base class & this base class pointer will point to the derived class object. base * bp = NULL; derived obj; bp = 40bj: 2. Dynamically base * bp = new derived here, we used the new function to create the object for derived class. bp 200 - 200 derived obj 300 308

9.9 what is the purpose of pure virtual function.

o The use of pure virtual function is to declare the function in base class and defining it in the derived class.

Q-10 can we create the pointer of that class which has pure virtual function it. , in

· Yes, we can create the pointer of the class which has pure virtual function in it.

o we cannot create the object of a such class but to extreate upcasting we create the pointer of class having pure virtual function in it.