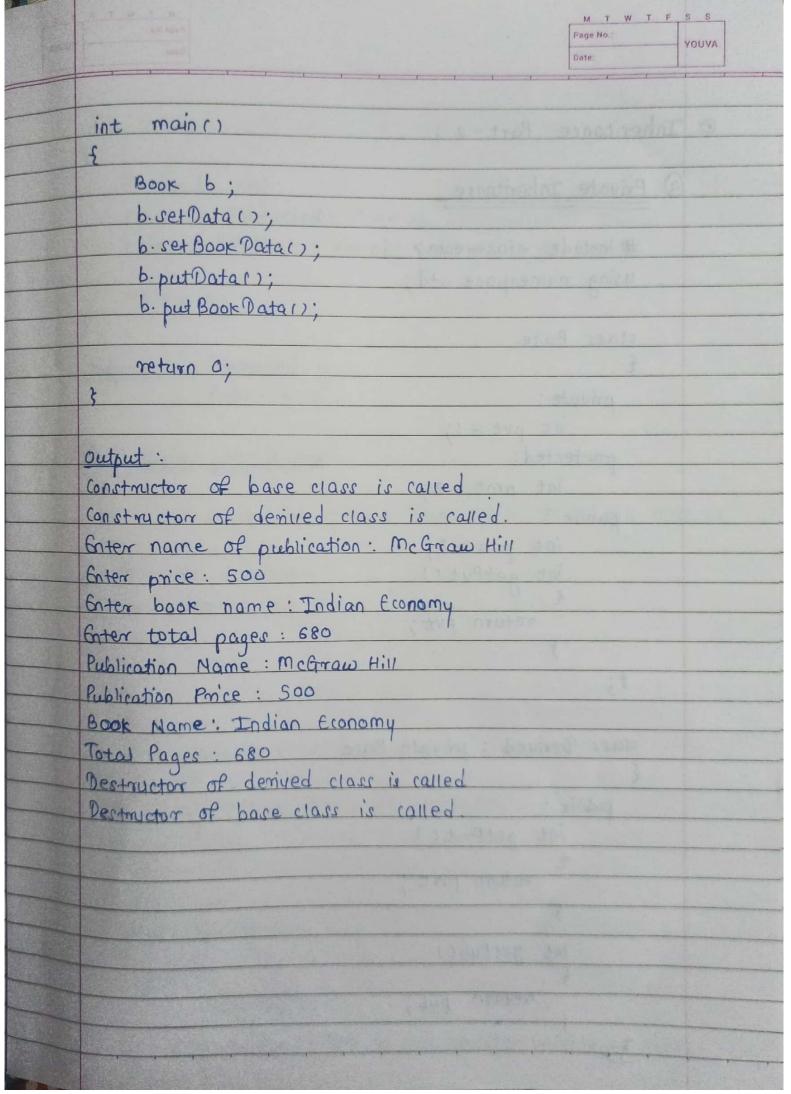
	Durvesh N. Pati) 12/10/2021 MTWTFSS
Altuo	2019BTEEN00035 T. Y. B. Tech (Batch: Expres: 4)
	Object Oriented Programming
	=======================================
	Exp. 7: Inheritance in OOP.
70	Trotorena pribative of auertana ent is todal II
0	Inheritance Part -1:
	Using a library to create the the derived
	Using a library to create the the derived classes, public inheritance, accessing the base class
	members, constructors & destructors in derived and
	base class.
7	Library:
	Cronding.
retoreac	@ publication.h
	Att S estat no neither behavior
	using namerpace std;
	ologo Publication
	class Publication
(protected:
diag	float price;
00	string name;
	Publication ()
	£
	cout << "Base class constructors is called " << endl;
	5
	N Publication ()
	cout << " Base class destructor is called " << end 1;
	3
	void set Data 1);
	void put(Pata ();
	3;

avec Transfer and the second s		Page No.: Date:	YOUVA
class Book: public	Publication	ng noiteoidean G	
public:	< mpsyla	in shutani #	
Book ()	< enints	s shulpnist	
£	r d. northanidus	" shillow the	
cout < c" In Co	nstructor of don	ved class is rai	ied;
NBOOK ()	0402 31 00/102	ison Liev V	
cout <c" "<="" lo="" td=""><td>estructor of deri</td><td>ve la constitue</td><td>u a l</td></c">	estructor of deri	ve la constitue	u a l
3	a line of del	ried ciass, is la	ned;
string hart	Win Enten and the	sa too	
int total-po	ages;		
void setBook?	ata()		
	oton :: put pate	Varia Paris	
cout << "In 6	inter book nome:	7 .	17 12 12
book	-mame;	2-440	
cout ec' in 6	inter total page	r: ":	
cín >> tota	1-pages;		
1			
void put Book ?	Data ()	Magn. 1988	
cout << "In	Book Name: " <	book - name :	
cout ex "In"	Total pages: " 2.	total-page	
	d ampointment	- Jea	
3;		Statement was	
COMPANIES AND AN ARRANGE AND AN ARRANGE AND ARRANGE AN	Paratasaa	A STATE OF THE STA	
	Teles Lancing and	andow land from	
			-



```
int main ()
    Derived obj;
    cout << "Protected: " << obj. getProt() << endl; cout << "Public: " << obj. getPub() << endl;
    return 0;
Output: Protected = 2
D Mutiple Inheritance
            class can inherit from more than one classes
   #include < ioutream>
    using namespace std;
    class Vehicle
      public:
          Mehicle ()
             cout << "This is liehicle" << end 1;
    class found theeler
       public :
            four wheeler ()
            cout ex! This is a 4 wheeler wehicle exend;
```

	AND THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN T	Page No.;	3 5
		Date:	YOUVA
	class car: public lating	1610	
	class car: public Vehicle, public forum	Sheeler	AT I
	Public:		
	(94 ()	KEVOEC!	
	100	Tollies :	
	cout << "This is care" << end!	Court ce "	
	3:		
	,	CO AVERT	
	int main()		
		A A CA	
	4	9	HILL
	Can obj;		
	return 0;	E Saladania	
	}	Sartuil-	(0)
1	or on labout from more than one claree		
	Output: This is a Mehicle	13 4	-40
	This is a trenicle		
	This is a 4 wheeler Vehicle	- shubni#	
	This is a care.	men enity	
-			
		delay take	
	C Hierarchical Inheritance	Tare V	
		Cariffin	
	more than one derived class is a	reated to	
	a single base class	THE POPULATION)
	not as "train is undelen "see end!) - 11 - 11 - 11 - 10	13	
	#include <iostneam></iostneam>		
	using namespace std;		
	0	City	
	class Vehicle		
	2	Sand Hall	
	public:		
	VahicleCi	41000	
		110	
	cout ex "This is a yehicle" ex	end1;	
	2:		

	MTWTFSS	
	Page No.:	
	YOUVA	
	Date:	
lass Car: public Vehicle	9104 71013	
	To Making T	
<u>}</u>	(3.9no)	
	S C J S FIPS LAND TO THE	
lars Bus: public Vehicle		
E		
<u>}</u>		
int main()	Houg 3 mp) 22010	
n man)		
Car c;		
Bus b;		
	Con Buc Such	
0019		
}		
Output: This is a vehicle		
	Canlam and	
This is a vehicle	Intom Jail	
	id mid	
a		
@ Hybrid Inheritance:		1
		7 7 7
It is implemented by combining	a more than one	
type of inheritance.	find a stantage of	
e usaisse		
#include Liostream>		
- Include 2105/11Comp		
using namespace std;		-
- manatagas	A Mustina (8)	
class Vehicle		
£	LINA CONTRACTOR	
public:		
Vahioto (2)	L Albatasast	
(lehicle!)	THE A REPORT !	
¿ cout ex! This is a vehicle	" ec end!	
, , , , is is a deficite	, , , , , , , , , , , , , , , , , , , ,	
15		

	Page No.:	5 5
	Date:	Youv
class fare	700 220	d)
2		
public.	Haydaya	
fare ()		
cout << "fame of uehicle" << endl;	THE STATE OF	nia!
}		
;		14
class Car: public Vehicle	Triony :	- Aid
2		71
4.	Car C;	-
	d ma	
class Bus: public Vehicle, public fame	B ADD	
f	neut se	1
¥°,		
This is a remale	- Post	20
int main()		
8		
Bur b;		
return 0;	Books	n
5		
the implemented by combining more than an		
output: This is a Mehicle	to say	
fore of liehicle.		
Company Compan	# actudes	
and the sampen	Con Anto	
@ Ambiguity in inheritance:		
- 0	SAF EEGI	
Ambiguity caused due to multiple inheritance. This problem is volved by making common base class as virtual base while classes during inheritance.	path the	
0		

```
# include <iostream>
using namespace std;
class A
  public:
      void show()
         rout << "A" << end1;
3;
class B
  public :
      void show()
         cout << "B" << end1;
7;
class c: public A, public B
int main()
   Cobj;
   obj. A :: show ();
   obj. B :: show ();
   return 0;
Output :
```

To the same		Page No.:	YOUVA
		Date.	
0	Ouga Naga i	Kut an P	
	Questions:	mon enlan	
	1. Which is the convect syntax of inheritan	ce ?	
	- class derived_classname: access_mode to	ore_class	name
	2 1* define class body *1 3;	reblie r	
	2. While inheriting a class, if no access me then which among the following is true > It gets inherited privately by default	2	pecifies
	3. It a derived class object is created, us is called first ?	which cons	tauctor
	> Base class constructor.	iou	
	4. The private members of the base class derived class but are not accessible di > True.	are visibli rectly	e in
	is mandatory for the derived class to and pass the arguments to base class	have con	structor
	6. Inheritance allows in C++ Program ?		
	is class Re-usability	ALOM SE	
	ii) creating hierarchy of classes	ido A	
	iii > extendibility.	A Ada	
	The state of the s	13.136	
		the state of	
		Bustine	