## 3.3 Object Oriented Programming (C++)

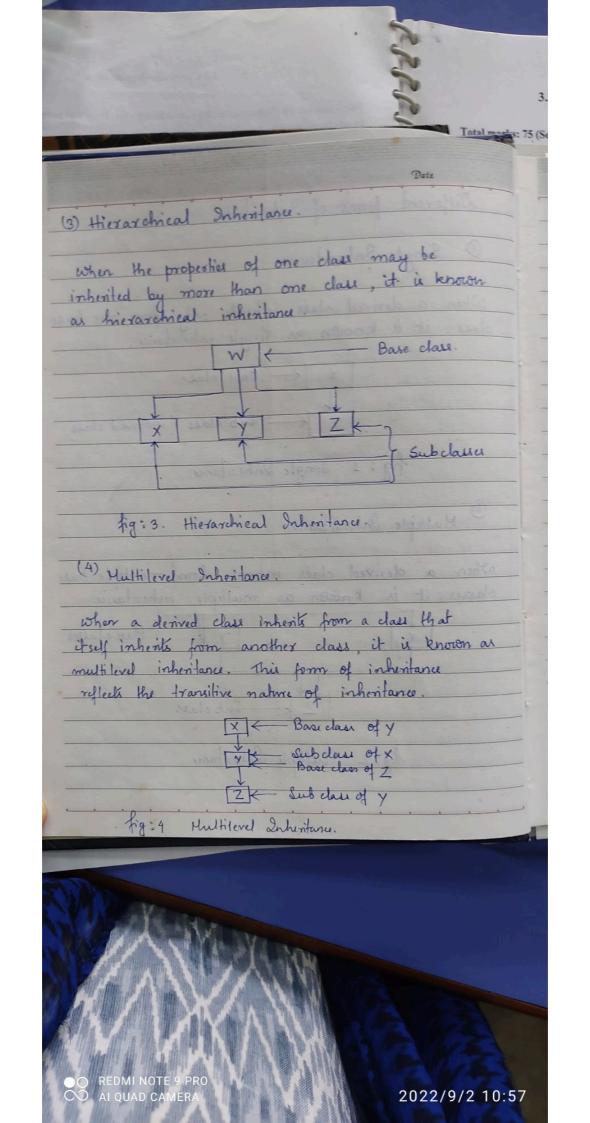
Total marks: 75 (Semester end examination - 60, Internal assessment - 15)

Inheritence. Date	
The ballion of the ball of the	
An impostant feature of oop is reusabi	lity.
ett supports the concept of reusability	via
inheritance or derivation. Inheritance is the	rabability
of one class to inherit properties from an e	rutina
das Inhentance allows tor create das	ses which
are derived from other classes, so that I	hey
automatically include some of its "parents"	" members
plus ils own.	Tibal)
	ib classes
The new derived classes are called so and the old class in known as the bou	se class
or super class.	
The derived class inherits the properti	es of the
The derived class inherits the properties base class, including the member function	ons (method)
THE STREET AS THE STREET WHALL SHE ASSESS THE STREET	
For example: We are going to suppose	le d
De want to declare a devies of classes	1:1.
describe polygone like our Crectangle, or	chechies
CTriangle. They have certain common for	of of
such as both can be described by mean	7
only two sides: height and base.	d oh
This could be represented in the world	se would
classes with a class c Polygon from which a	c Triangle.
derive the two other ones: c Reclargle and	
Y. Y.	
Checlangle CTmarge	Santa Addition

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Date Different forme of Inheritance. Single Inheritance. When a derived class inherits only from one base class, it is known as single inheritance, X Base class ( Serived class ( Derived class) fig: 1 Single Inheritance. Multiple Inheritance. when a derived class inherits from multiple base classes, it is known as multiple inheritance Bax classes -Sub class fig: 2 Multiple Inhentance.



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(5) Hybrid Inheritance

other a derived class inherits from multiple bone classes and all of its base classes inherit from a lerger base classe, this form of inheritance is known as hyporid inheritance.

W/ Base class y - Subdam of W Subclann 1 Z Je Sub class of 1, Y

fig: 5. Hybrid Inhinitare

Total marks: 75	Soficiang derived close to identify the gen c++, a derived close to identify the close to its boar close in addition to its over details or derived close the aprilar of defining a derived close the aprilar of defining a derived close the visibility mode to the protected from the boar close many the visibility mode is private of the visibility mode is private.  The defount visibility mode is private of a private.  The defount derived from the close members or the desired close many the visibility and the visibility oned.	
●○ REDMI NOTE 9 PRO ○○ AI QUAD CAMERA	Safe wing don'ted dass  Son att a derived do  close from which it is  in addition to its over a  The syntax of definition  close have single interitory  there. The colon (:) ind  elose-have is derived to  the visibility mode many  on the defoutt visibility  availability mode central  on the subdoon (derived  in the subdoon (derived)	2022/9/2 10:57

for example:    I members of ABC   private derivation     I members of ABC   private derivation     I members of AYZ     I members of XYZ     I members of X	clows ABE 11 book clows  Reduct ABE 11 pook clows  Reduct AVZ; provate ABC 11 pri  Reduct AVZ; provated ABC 11 pri  Reduct ABC 11 privated  Reduct ABC	Moc Moc MyZ
class ABE 11 boos close  \$ 11 members of ABC  \$ 12 private ABC 11 pri  \$ 12 public ABC 11 pri  \$ 12 public ABC 11 pri  \$ 12 projected ABC 11  \$ 12 projected ABC	class ABE 11 boar class  f 11 members of ABC  f 12 parale ABC 11 pm  f 12 paraled ABC 11 pm  f 13 paraled ABC 11 pm  f 2 paraled ABC 11 pm  default	example:  S  Il member of ABC  B  S  Il member of ABC  Il member of XYZ  Il member of XYZ
ABE II bose closes  \$\frac{1}{2}, \times ABE II private ABE	ABE II borse closes  1 If members of ABC  XYZ: paivate ABC II pri  XYZ: projected ABC II  YYZ: ABC II private of  2.  Y	ABE 11 bone closes  Sy  xyz; private ABE 11 private  1 11 members of **YZ.
3; In members of ABC // private ABC // private ABC // private ABC // private of XYZ & ABC // members of 2; ABC // members of 2; ABC // members of 3;	3; members of ABC 11 prixyz is public ABC " private ABC " private ABC " private of XYZ is ABC " private of ABC " private of 2; members of 2; members of 3; members of 3; members of 3;	\$ >> // members of ABC  \$ >> XYZ : private ABC // private  \$ \$ \tag{4} \tag{7} \tag{7} \tag{7} \tag{7} \tag{7} \tag{7} \tag{7}
\$\frac{1}{x\sqrt{2}}; pavale ABC 11 pm  \frac{1}{x\sqrt{2}}; public ABC " \frac{1}{x\sqrt{2}} \frac{1}{x\sqrt{2}} members of \frac{1}{x\sqrt{2}} \fra	\$ xyz : powale ABC // prince xyz : powale ded ABC // xyz : powaled ABC // xyz : ABC // members of 2;  \$ // members of 2;  \$ // members of 3;  \$ // members of 3;  } // members of 3;  } // members of 3;	\$ >> xyz : private ABE // private  \$ \times \text{1} member of **YZ
Fy xyz : public ABC " xyz xyz : protected ABC " 3; members of 4; members of 3; members of 4; members	F; xyz : public ABC " xyz xyz : projected ABC " F; members of xyz : ABC " privaled 2; members of 2; members of 3; members of 3; members of 3; members of 3; members of 3; members of 3; members of 4; members of 3; members of 3; members of 3; members of 3; members of 4; members of 4; members of 4; members of 3; members of 4;	// member of
xyz : public ABC "  xyz : protected ABC "  3.  xyz : ABC " privated ABC "  3.  4	xyz : public ABC "  xyz : projected ABC "  3.  xyz : ABC " privated ABC "  3.  4	
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3;  XYZ : protected ABC "  3;  XYZ : ABC " privated of Stault  3;  4	3;  XYZ : protected ABC "  3;  XYZ : ABC " privated of  Actault  3;	y members of
3. ABC " private derivation xyz : ABC " private derivation default.  ?;  }	3. ABC " private derivation of XYZ of members of XYZ.	3; protected ABC "
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		XYZ: ABC " private derivation
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		TOTAL STANDARDS (A)