**Practical Assignment: Polymorphism – part 2**

**Topics : abstract class, concrete class, new, delete, pure virtual function**

|  |
| --- |
| *Animal*  *<<abstract>>* |
|  |
| +legs():int =0;  +~Animal() |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Lion |  | Snake |  | Bird |
|  |  |  |  |  |
| +legs():int  + ~Lion() |  | +legs():int  + ~Snake() |  | +legs():int  + ~Bird() |

**Write menu driven C++ Program to demonstrate dynamic binding with abstract class and concrete class and virtual destructor**

**Hints:**

1. legs member function return number of legs of object. E.g. for class Animal it is pure virtual function and we have to override for class Lion, Snake and Bird, leg function of object snake return 0, object of bird class return 2 and object of lion class return 4.
2. Destructor of animal will display “ destructor of animal class”.

Destructor of Lion will display “ destructor of Lion class”. … same for class Snake and Bird.

1. Use new keyword to create object and use delete keywoard to delete object.

Sample output

C: Create Object

D: Delete Object

E: Exit Application

C

L: Lion

S: Snake

B: Bird

G: goto previous menu

L

Number of legs4

L: Lion

S: Snake

B: Bird

G: goto previous menu

S

Number of legs0

L: Lion

S: Snake

B: Bird

G: goto previous menu

B

Number of legs2

L: Lion

S: Snake

B: Bird

G: goto previous menu

G

C: Create Object

D: Delete Object

E: Exit Application

D

desructor of class Bird

desructor of class Animal

C: Create Object

D: Delete Object

E: Exit Application