Lab Report 3

Object Oriented Programming and Data Structures

1. Create a class named 'Friend' with private data members (age, name, height,$\cdots$,etc).
2. The class should have at least one private data member which is declared using dynamic memory allocation, ***also create a private data member of type int "rank".***
3. Write a constructor that can be used to initialize the values of private data members.
4. Overload the constructor so that instantiation of an object is also possible.
5. Write a copy constructor as well.
6. Write a public member function animate() that displays *"In animate routine"* and request user to enter an animation request from a menu. e.g. 1. Run(), 2. Jump(), 3. Eat(),..., or invalid option.
7. Create Private member functions Run(), Jump(), Eat() that are called from function animate() written as a public function. The functions should simply display something like *"in Run() routine"*.
8. Write destructor for the class that deletes the dynamically allocated element while displaying *"In destructor routine of Object* ***Name****"*.
9. Illustrate usage of this class in the main routine of the program.
10. ***Overload operator '++' that increments the 'rank' of the friend, write ++ operator in both postfix and prefix format. Use 'this pointer' while referring to the 'rank' data member in the overload function defintion.***