Create a class EngineType that stores engine information according to this UML diagram given below:

EngineType
-maxrpm: int -horsepower: float -torque: double
+EngineType() +~EngineType() +printInfo() : void +setInfo(int, float, double) : void +getInfo() : void +calculateTorque() : void +calculateHorsepower() : void

Given power (kW) = torque (Nm) * Pi * maxrpm / 30000 and 1 kW = 0.986320 hp

[Your assignment]

1. Write the class definition for EngineType, with all class members as outlined in the UML diagram together with the class constructor and destructor.
2. The constructor will declare all variables to 0, the destructor will print "object destructed" when called.
3. Declare an object engine1 and engine2 from the class EngineType.
4. engine1 will be set to 300 hp, 0 torque and maxrpm of 5000 rpm using the setInfo routine.
5. engine2 will call getInfo routine where the program will ask user for the input to the parameters.
6. engine1 will then call function calculateTorque() to calculate the engine torque from the stored variables.
7. engine2 will call function calculateHorsepower() to calculate the engine horsepower from the stored variables.
8. Both engine1 and engine2 will call printInfo() to print stored values to screen.

Write a complete program utilizing all these requirements, including the main() function. Submit your assignment in printed form on **31st MARCH 2023** during lab.

[20 marks]