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PROGRAM 9.1

1. Output of the program :

|  |
| --- |
| This is parent class area :  This is parent class area : |

Since there is no “virtual” word in front of the int area() in base class, it is static binding. It is redefined but not overridden. The code which the method to be bound with is decided by the compiler at compile time and it is unchanged throughout the execution of the program. During the compilation, the compiler already know that the shape at line 43 is actually pointer for the class Shape. The object shape will then refer all the methods in the class Shape. So, the shape->area() in line 50 and 55 here will refer the method (int area() ) in the class Shape since it is static binding. The method area associated with shape is pre-bound at compile time and remain unchanged at runtime. So, every time calling to the method area (line 50 and 55) will always call method area of class Shape. Since the method area in class Shape will print “This is parent class area : ”. However, the value 0 will not be returned because there is no place for the 0 to be returned. So, there is so such result will be printed.