Text

Description automatically generated

Provide a brief (3- to 4-sentence) description of how and why the output was displayed

The main method in the program creates a bomb and gun object; the bomb object is named weapon one, and the gun object is named weapon 2. The weapon class within the program is abstract (so it cannot be instantiated); however, the gun method extends to the weapons method; therefore, the gun and bomb objects can instantiate fireWeapon via the Gun and Bomb methods. The parameter (from instantiating the bomb and Gun objects) is initially passed through the gun/bomb method before being passed to fireWeapon; at which point, the parameter is received by fireWeapon, and assigned to the variable ‘power’ before the print statement executes.

Text

Description automatically generated

Provide a brief (3- to 4-sentence) description of how and why the output was displayed

The main method has not changed; however, upon instantiating the bomb and gun methods, the arguments are passed to the bomb and gun methods, and the arguments are captured within the local ‘power’ variables. Since the child classes, bomb, and gun, are overridden, they take the action that would have been executed within the fire weapon parent method.

Text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated