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// File: projectileDist.cpp
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/* This program computes the horizontal distance travelled by a projectile
   that is shot at a 45 degree angle with an initial velocity v on earth.
*/

#include <iostream>
using namespace std;

int main ()
{
  double v;          //meter per second
  double g = 9.81;  //meters per second^2
  double distance;  //distance in meters

  cout << "Enter the initial velocity (meter/second): " ;
  cin  >> v ;

  distance = (v * v) / g;
  cout << "Horizontal distance travelled is " << distance << " meters."
       << endl;

  return (0);
}
```