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| Input | Process | output |
| final double ROOM\_UNDER\_250  final double ROOM\_TO\_500  final double ROOM\_UNDER\_1000; final double ROOM\_1000\_PLUS  final double LITTLE\_SHADE  final double LOTTA\_SHADE  double roomLength  double roomWidth  double capacity  int shadeAmount  String roomName  int numRooms | String outputHeader  String shadeType  double roomArea  double adjustForShade  double totalCapacity  String answer  Algorithm   1. Ask user to enter the name of room   String roomName   1. Ask user to enter length of room in feet, validate   roomWidth   1. Ask user to enter width of room in feet, validate   roomWidth   1. Calculate area of room   roomArea = roomLength \* roomWidth   1. Display a menu that asks user how much shade the room gets   shadeAmount   1. Determine capacity needed for moderately shaded room, adust for shade   if (roomArea < 250)  capacity = ROOM\_UNDER\_250;  else if (roomArea <= 500)  capacity = ROOM\_TO\_500;  else if (roomArea < 1000)  capacity = ROOM\_UNDER\_1000;  else capacity = ROOM\_1000\_PLUS;   1. Create switch, validate   switch (shadeAmount)  {  case 1:  adjustForShade = capacity \* LITTLE\_SHADE;  totalCapacity = capacity + adjustForShade;  shadeType = "Little Shade";  break;  case 3:  adjustForShade = capacity \* LOTTA\_SHADE;  totalCapacity = capacity - adjustForShade;  shadeType = "Abundant Shade";  break;  default:  totalCapacity = capacity;  shadeType = "Moderate Shade";  break;  }   1. Display output   roomArea, shadeType, totalCapacity   1. Ask user if they want to enter info about another room using y or Y 2. After user is done, output number of rooms | shadeType  roomArea  totalCapacity  numRooms |