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| --- | --- | --- |
| Input | Process | output |
| double roomLength  double roomWidth  int shadeAmount  String roomName  int numRooms | String shadeType  double roomArea  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. Display a menu that asks user how much shade the room gets,validate   shadeAmount   1. Call displayTitle(); 2. Call calculateArea(roomLength, roomWidth); 3. Call translateShadeChoiceToString(shadeAmount); 4. Call calculateBTUsPerHour(roomArea, shadeAmount ); 5. Call displayRoomInformation(all the things); 6. Ask user if they want to enter info about another room using y or Y 7. After user is done, output number of rooms | roomName  shadeType  roomArea  totalCapacity  numRooms |

displayTitle method

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| Input | Process | output |
|  | String outputHeader  Algorithm:   1. Display company name | outputHeader |

calculateArea method

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| Input | Process | output |
| double roomLength - param  double roomWidth - param | double roomArea  Algorithm:   1. Calculate area of room   roomArea = roomLength \* roomWidth   1. Return roomArea | roomArea |

translateShadeChoiceToString method

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| Input | Process | output |
| int shadeAmount - param | Algorithm:   1. Create switch   switch(shadeAmount) {  case 1:  shadeType = “Little”;  break;  case 2:  shadeType = “Moderate”;  break;  case 3:  shsdeType = “Abundant”;  break;  }   1. Return shadeType; | shadeType |
|  |  |  |

calculateBTUsPerHour method

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| Input | Process | output |
| double roomArea – param  int shadeAmount - param  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 capacity | double adjustForShade  double totalCapacity  algorithm:   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   switch (shadeAmount)  {  case 1:  adjustForShade = capacity \* LITTLE\_SHADE;  totalCapacity = capacity + adjustForShade;  break;  case 3:  adjustForShade = capacity \* LOTTA\_SHADE;  totalCapacity = capacity - adjustForShade;  break;  default:  totalCapacity = capacity;  break;  }   1. Return totalCapacity | totalCapacity |

displayRoomInformation method

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| Input | Process | output |
| String roomName -param  double roomArea - param  String shadeType - param  double totalCapacity - param | Algorithm:   1. Display information |  |