# BMI calculator

*Michael Malin Jr*

*Saturday, August 08, 2015*

## Body Mass Index(BMI) calculator

This paper will show you how to calculate your BMI and your weight category with my bmiApp() function. BMI is used to help you measure if you are underweight, normal weight, overweight, or obese based on your height and weight.

**You can run the app with the following function:**

```
bmiApp()
```

# Body Mass Index(BMI) calculator

**Feet**

```
5
```

**Inches**

```
5
```

**Weight**

```
150
```

Submit

## Results:

**Below is the code for the user interface(ui), which controls how the app looks, and the server, which controls what the app does:**

```
bmiApp <- function(feet, inches, weight) {
        require(shiny)
        shinyApp(
                ui = pageWithSidebar(
                        # Application title
                        headerPanel("Body Mass Index(BMI) calculator"),
                        sidebarPanel(
```

```r
                    numericInput('feet', 'Feet', 5, min = 3, max = 7, step = 5),
                    numericInput('inches', 'Inches', 5, min = 1, max = 12, step = 5),
                    numericInput('weight', 'Weight', 150, min = 75, max = 300, step = 5),
                    submitButton('Submit')
            ),
            mainPanel(
                    h3('Results:'),
                    h4('Your BMI is:'),
                    verbatimTextOutput("inputValue"),
                    h4('Weight Category:'),
                    verbatimTextOutput("prediction")
                    )
            ),

    server = function(input, output) {
            # BMI calculation
            bmi = function(feet, inches, weight){
                    w = weight * 703
                    h.Inches = (feet * 12) + inches
                    h.square = h.Inches * h.Inches
                    calc = w/h.square
                    print(calc)
            }
            bmi.pred = function(feet, inches, weight){
                            w = weight * 703
                            h.Inches = (feet * 12) + inches
                            h.square = h.Inches * h.Inches
                            calc = w/h.square

                            if(calc <= 18.5){
                                    print("Underweight")
                            } else if(calc >= 18.5 & calc <= 24.9){
                                    print("Normal weight")
                            } else if(calc >= 25 & calc <= 29.9){
                                    print("Overweight")
                            } else{
                                    print("Obesity")}

                    }
            output$inputValue <- renderPrint({bmi(input$feet, input$inches, input$weigh
t)})

            output$prediction <- renderPrint({bmi.pred(input$feet, input$inches, input$we
ight)})
            }

    )
```

```
}
```

## References:

1. http://www.whathealth.com/bmi/formula.html (http://www.whathealth.com/bmi/formula.html)
2. http://www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmicalc.htm
   (http://www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmicalc.htm)