**Test case**

* **Test case name:**
* Calculate BMI.

**Pre-conditions:**

* The user “Doctor123” already has the account and has logged in the system.

**Post-conditions:**

* The patients' BMI and health status are displayed.

**Testing flow:**

* **Test case 1: Input correct information**

1. Doctor123 clicks “Calculate BMI” button.
2. The system displays a dialog box to enter patient information to calculate BMI.
3. The user inputs full name “Võ Huỳnh Anh Vũ”, Age “20”, Sex “Male”, Weight “60kg”, and height “1.7 m”. Then the user clicks “Calculate” button.
4. Display the message "BMI = 20.8 Healthy".

* **Test case 2: Input incorrect information**

1. Doctor123 clicks “Calculate BMI” button.
2. The system displays a dialog box to enter patient information to calculate BMI.
3. The user inputs full name “Võ Huỳnh Anh Vũ”, Age “20”, Sex “Male”, Weight “1160kg”, and height “3.7 m”. Then the user clicks “Calculate” button.
4. The system displays the message "Patient’s height and weight are not true. Please type again! The proper range is: (0 kg < weight < 1000 kg, 0 meter < height < 3 meters ".

* **Test case 3: Input the age under 5:**

1. Doctor123 clicks “Calculate BMI” button.
2. The system displays a dialog box to enter patient information to calculate BMI.
3. The user inputs full name “Võ Huỳnh Anh Vũ”, Age “4”, Sex “Male”, Weight “11kg”, and height “1.1 m”. Then the user clicks “Calculate” button.
4. The system doesn’t calculate BMI and it displays the message "For children under 5, if you want to identify the health status, you will have to look up the WHO percentile table".

* **Test case name:**

Add patient’s personal information to the management list.

**Pre-conditions:**

* The user “Doctor123” already has the account and has logged in the system
* The user “Doctor123” has already calculated BMI for at least 1 patient. “

**Post-conditions:**

* New patient’s personal information (Full name, age, BMI, condition) is added to the list managed and it is saved in the “List” of the Menu:

1. Emily, 35, 18.4, Underweight.
2. Mark, 58, 25.2, Grade 1 obesity.
3. Nguyễn Minh Tùng, 20, 24.3, Overweight
4. Võ Huỳnh Anh Vũ, 20, 20.8, Healthy

**Testing flow:**

* **Test case 1: Add new patient’s information which has not already been added to the List:**

1. After calculating BMI, the system appears “Add list” button.
2. When the users press “Add list” button, patient’s personal information (Võ Huỳnh Anh Vũ, 20, 20.8, Healthy) will be saved in the list.
3. Users see the list that saves information at the category “List” in the Menu.
4. After the patient’s personal information is saved, the system will send an email about patient’s BMI, health status and proper nutrition.

* **Test case 2: New patient’s information added already exists in the list**

1. After calculating BMI, the system appears “Add list” button.
2. When the users press “Add list” button, patient’s personal information (Mark, 58, 25.2, Grade 1 obesity) will not be saved.
3. The system displays the message "This patient already exists in the list".