<Doctor> Make Prescription

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| **USE CASE – WD01** | | | |
| **Use Case No.** | WD01 | **Use Case Version** | 1.0 |
| **Use Case Name** | Make prescription | | |
| **Author** | QuyHK | | |
| **Date** | 16/11/2015 | **Priority** | High |
| **Actor:**   * Doctor.   **Summary:**   * This use case allows doctor to make prescription to patient.   **Goal:**   * New prescription data is created.   **Triggers:**   * Doctor sends command to make prescription request.   **Preconditions:**   * Actor logged in the system with role “Doctor”. * Patient has had a Prevention Check with nurse. * Patient has had a Food Ingredient with Nutrition Doctor.   **Post Conditions:**   * **Success:** New prescription is sent to patient. * **Fail:** Display error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Doctor goes make prescription of patient view. | System display view with following information:   * Name: text, read only. * Age: text, read only. * Gender: text, read only. * Illness: text, read only. * Status: text, read only. * Description: text area, read only. * List days of medical history of patient with information: * + Date: datetime * + Appointment: datetime * Suggest: button.   - Diagnostic: text input with option, required, length 3-40.  - Medicines:  + Name of medicine: text input with option, required.  + Times: text input with option, required, range value 1-6.  + Number of quantity per time: number text input, required, range value 1-10.  + Unit of medicine: text input, required, value depend on medicine.  + Advice: free text input.  - Food:  + Name of food: text input with option, required.  + Time: text input with option, required, range value 1-6.  + Number of quantity per time: number text input, required.  + Unit of food: text input with option, required, value depend on food.  + Advice: free text input.  - Practice:  + Name of practice: free text input, required.  + Time: text input with option, required, range value 1-6.  + Quantitative: free text input, required.  + Advice: free text input.  +Calories Estimate: free text input  - Appointment Date: date, required.  - Note: free text area. | | 2 | Doctor inputs diagnostic, medicines, food, practice, Note, appointment date.  [Alternative 1, 2] | System validate information. | | 3 | Doctor sends make prescription command with inputted information. | System display popup finish treatment request for confirmation. | | 4 | Doctor sends command to confirmation request.  [Alternative 3] | System create new prescription, display popup information of new prescription |   **Alternative Scenario:**  [Alternative 1]   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Doctor sends suggest treatment of illness for diagnostic | System input automatically information of medicines, practices, foods. |   [Alternative 2]   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Doctor sends make prescription command without inputting information | System show alert message to doctor. |   [Alternative 3]   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Doctor sends command to No request. | System close popup confirmation. |   **Exceptions: N/A**  **Relationships:** Extend with “Suggest treatment”  **Business Rules:**   * List days of medical history is included: * + Date is the day when doctor make prescription. * + Appointment is appointment date. * The prescription must be included medicines, foods and practices. * Appointment must be in the future and not over 15 days from current day. * Format of date must be “dd/mm/yyyy”, ex: 25/09/2015. * Appointment date get default day is next 7 days form current day. * Calories Estimate has to suggest by using “total calories” in Food Ingredient subtract “basal metabolic rate” in Prevention Check. * Diagnostic input only use option. * Medicine input only use option. * Doctor can make patient’s Food Ingredient in tab food. * Doctor can view patient’s Food Ingredient in tab food. * If this appointment is re-examination, doctor can view patient’s medical record data in tab practice. * Quantitative in food, medicine should be use option. Quantitative in practice should be use free text input. | | | |

View Patient Medical History

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| **USE CASE – WD02** | | | |
| **Use Case No.** | WD02 | **Use Case Version** | 1.1 |
| **Use Case Name** | View Patient Medical History | | |
| **Author** | QuyHK | | |
| **Date** | 16/11/2015 | **Priority** | High |
| **Actor:**   * Doctor.   **Summary:**   * This use case allows doctor to view medical history of patient.   **Goal:**   * Show medical history of patient for doctor.   **Triggers:**   * Doctor select an appointment date to view.   **Preconditions:**   * User logged in system with role “Doctor”. * This appointment is re-examination.   **Post Conditions:**   * **Success:** Medical history of patient show for doctor. * **Fail:** Show error message   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Doctor selects an appointment date to view. | System display medical history of patient in specific day.  - Date of appointment: text, read only.  - Medicines:  + Name of medicine: text input, read only.  + Times: text input, read only.  + Number of quantity per time: text input, read only.  + Unit of medicine: text input, read only.  + Advice: text input, read only.  - Food:  + Name of food: text input, read only.  + Time: text input, read only.  + Number of quantity per time: text input, read only.  + Unit of food: text input, read only.  + Advice: text input, read only.  - Practice:  + Name of practice: text input, read only.  + Time: text input, read only.  + Quantitative: text input, read only  + Advice: text input, read only. |   **Alternative Scenario:** N/A  **Exceptions:** N/A  **Relationships:** N/A  **Business Rules:**   * List appointment date | | | |

**Trang 24:**

Hardware Interface:

* Android Smartphone:
  + Bluetooth 4.0 or above.
  + RAM: 1GB
  + CPU: 1.2GHz
* Wristband:
  + Bluetooth 4.0 or above.
  + RAM: 64Kb
  + ROM: 64Kb

Software Intercafe:

* Web application: work with Firefox(v30 or above), Chromes(v25 or above), Explorer(v10 or above).
* Mobile Application: Android operating system (v 4.3 or above), BLE technology supported.
* Wristband: Firmware revision: 01011206.

**Trang 18:**

* For mobile development:

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| Hardware | Minimum Requirements | Recommended |
| Internet Connection | 512Kbps | Wi-Fi Connection 12MB |
| Operating System | Android 4.3 | Android 4.4.2 |
| Hardware | Bluetooth 4.0 | Bluetooth 4.0 |
| Memory | 512 MB of RAM | 1GB of RAM or more |

*Table 5: Hardware requirement for mobile development*

* For wristband:

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| Hardware | Minimum Requirements | Recommended |
| Bluetooth Connection | BLE Supported | BLE Supported |
| Firmware Revision | 01011206 | 01011206 |
| Hardware | Bluetooth 4.0 | Bluetooth 4.0 |
| Memory | 64Kb of RAM | 64Kb of Ram |

**Trang 56:**

Analytic data of wristband

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| **USE CASE – WS01** | | | |
| **Use Case No.** | WS01 | **Use Case Version** | 1.1 |
| **Use Case Name** | Analytic data of wristband | | |
| **Author** | QuyHK | | |
| **Date** | 29/09/2015 | **Priority** | High |
| **Actor:**   * Scheduler.   **Summary:**   * This use case allows scheduler to use formula for analytic number of step from wristband.   **Goal:**   * Calculating calories burned, distance from patient’s data.   **Triggers:**   * The time hits configured time.   **Preconditions:**   * Analytic time has been configured.   **Post Conditions:**   * **Success**: System update data of patient. * **Fail**: Error detail will be tracked in a log file.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Server checks the current time.  If it hits configured time, analytic data process starts. | System use formula to calculate and response:   * Calories burned. * Distance walking or running.   System compares the number of calories recommended by doctors, calculate ratio complete practice every day and save in system.  [Exception 1] |   **Alternative Scenario:** N/A  **Exceptions:**  [Exception 1]   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | System timer task is interrupted | Error detail will be tracked in a log file. |   **Relationships:** N/A  **Business Rules:**   * System have to analytic data using formula had latest update from staff. * System timer will check event at 23:00 every day, this config time is fixed. * System calculate and use data every day. * Log file has to save follow this structure: [Datetime] – [] | | | |

**Trang 46:**

Make nutrition ingredient

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| **USE CASE – WND01** | | | |
| **Use Case No.** | WND01 | **Use Case Version** | 2.0 |
| **Use Case Name** | Make Nutritional Ingredient | | |
| **Author** | QuyHK | | |
| **Date** | 30/09/2015 | **Priority** | Normal |
| **Actor:**   * Nutrition doctor.   **Summary:**   * This use case allows staff to be able to add food ingredient survey of patient.   **Goal:**   * Nutrition doctor will have more information of patient.   **Triggers:**   * Nutrition doctor selects a patient in list.   **Preconditions:**   * User logged in to the system as nutrition doctor role. * Specific patient must be registered by nurse.   **Post Conditions:**   * **Success:** System add information into patient’s medical record. * **Fail:** Error message displayed.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Nutrition doctor selects a patient. | System list following information:   * Microphone: Button * Breakfast * Result : free text input, length no limit * Breaktime Morning * Result : free text input, length no limit * Lunch * Result : free text input, length no limit * Breaktime Afternoon * Result : free text input, length no limit * Dinner * Result : free text input, length no limit * Eat late at night * Result : free text input, length no limit * Suggest: Button | | 3 | Nutrition doctor inputs fields and sends suggest foods command.  [Alternative 1] | * System analytic foods to nutrition. * System show nutrition view with following information: * Meal Assessment * Breakfast: numeric input, required * Breaktime Morning: numeric input, required * Lunch: numeric input, required * Breaktime Afternoon: numberic text input, required * Dinner: numeric input, required * Eat Late At Night: numeric input, required * Nutritional Assessment * Starch: numeric input, required * Protein: numeric input, required * Fat: numeric input, required * Animal Protein: numeric input, required * Animal Fat: numeric input, required * Calcium: numeric input, required * Sodium: numeric input, required * Iron: numeric input, required * Zinc: numeric input, required * Vitamin B1: numeric input, required * Vitamin C: numeric input, required * Vitamin B2: numeric input, required * Vitamin PP: numeric input, required * Fiber: numeric input, required   [Exception 1] | | 4 | Nutrition doctor input fields | System validate inputted information.  [Exception 2] | | 5 | Nutrition doctor send make nutrition ingredient command | Information of patient’s nutrition is create in storage. System redirect to list patients. |   **Alternative Scenario:**  [Alternative 1]   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Nutrition doctor selects microphone. | System is enable voice | | 2 | Nutrition doctor says a sentence of meal. | System selects specific meal. | | 3 | Nutrition doctor says a sentence of food | System fill information to “Result” automatically. |   **Exceptions:**  [Exception 1]   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | Nutrition doctor inputs wrong format. | System show wrong format message. |   [Exception 2]   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | Inputted information is not numeric. | System show wrong input message. |   **Relationships:** Extend with “Analytic meal” and “Analytic meal by voice”.  **Business Rules:**   * Nutrition’s unit of measure has to show on screen. * All values in numeric fields have to have value bigger than 0. * Breakfast, breaktime morning, lunch, breaktime afternoon, dinner, eat late at night have to have unit of measure which is calculated as kcal. * Starch, protein, fat, animal protein, animal fat, fiber have to have unit of measure is g. * Calcium, sodium, iron, zinc, vitaminB1, vitaminB2, vitaminC, vitaminPP have to have unit of measure is mg. * If there is no nutrition for analysis, valid will be set default is 0.0 * Inputted values in meal’s result field must be in format with a comma, such as “ăn một tô bún thịt nướng, ăn một bát cơm …” * After analysis foods by splited with a comma, system will calculate food nutrition for each food based on each unit of food, for example: 1 bát cơm = 200 Kcal. | | | |