

R&V Point Allocation Table

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Module Name	High Level Requirement	Points
Power Module	<ul style="list-style-type: none">• This module should supply enough steady power to the circuit.• This module should supply 11.5 to 12.5 Volts for the motor, 4.75-5.25 Volts for sensor modules and magnetic lock, and 3.2-3.4 Volts for LCD and ESP8266 (WiFi Module).	5
Control Module	<ul style="list-style-type: none">• This module should gather analog and digital inputs from the sensor module and create correct analog outputs to control the LEDs in the display module.• This module should create correct outputs to control the motor.	10
Motor Module	<ul style="list-style-type: none">• This module should use the stepper motor to control the rotation of the cascading dispensing system.	5
Physical Design	<ul style="list-style-type: none">• This module should be able to hold pills (capsules) with different sizes.• This module should be able to dispense pills correctly.	5
Display Module	<ul style="list-style-type: none">• This module should display different color LED lights for different stages to notify users.• This module should display the word instructions on the LCD screen.	5
Sensor Module	<ul style="list-style-type: none">• This module should do the correct counting of pills dispensed using a photoelectric sensor.• The pressure sensors should be able to detect unreasonable actions on the cap.• The magnetic lock should be normally close and be able to correctly indicate separation actions.	6
Wifi Module	<ul style="list-style-type: none">• This module should create communication between the hardware and the software through the server.• This module should be able to connect to the WiFi.	5
Software Module	<ul style="list-style-type: none">• This module should be able to send a “reset” command to the controller.• This module should be able to send a “refill” command to the controller.	9

	<ul style="list-style-type: none"> ● This module should be able to send notifications while detecting faults from users. ● This module should be able to receive notifications for different stages. ● This module should contain different account categories for users and guardians/doctors. ● This module should be able to do some data analyzing of the user's drug taking habits. 	
Total		50