MAIN FUNCTION WASH MODE FUNCTION DS18B20 TEMPERATURE SENSOR FUNCTION ► Wash_mode_funtion() DS18B20_Start() DS18B20_Write(data Check P button Update_temperature() | pressed() Mode = 1DS18B20_Start() Set_pin_output(DS18B20_Pin) Set_pin_output(DS18B20_Pin) Open_pump_wash() Open_pump_wash() Update_temperature() level boiler() Update_temperature() Update_temperature() HAL GPIO WritePin Delay_ms(1) (DS18B20_BOILER_Pin, 0) Return main funtion() Delay_ms(40000) Delay_ms(120000) **F** Open_boiler_heater() Inspect_tem DS18B20_Write (0xCC) Update_temperature() 「 Delay_us(480) DS18B20_Write (0x44) Close_pump_wash() Close_pump_wash() Update_temperature() Update_temperature() Set_Pin_Input(DS18B20_Pin) HAL_GPIO_WritePin HAL_GPIO_WritePin Delay_ms(800) Close_boiler_heater() Update_temperature() Close_door() (DS18B20_BOILER_Pin, 0) (DS18B20_BOILER_Pin, 0) Delay_ms(5000) Delay_ms(10000) Delay_us(1) Delay_us(50) DS18B20_Start() Delay_us(80) Open_pump_rinse() Open_pump_rinse() Open_pump_rinse() Update_temperature() _level_tank() Update_temperature() Update_temperature() Set_Pin_Input(DS18B20_Pin) Set_Pin_Input(DS18B20_Pin) Delay_ms(1) HAL_GPIO_ReadPin → Lcd_display(Error 1 Delay_ms(15000) Delay_ms(40000) F Open_tank_heater() Inspect_tem Delay_us(50) DS18B20_Write (0xCC) Close_pump_rinse() Close_pump_rinse() DS18B20_Write (0xBE) Update_temperature() Update_temperature() Stop() Delay_us(400) Open_Valve() End End Temp = DS18B20_Read(Return main funtion() EXTERNAL INTERRUPT **F** Open_boiler_heater() Display_lcd(Temp) _boiler(85) DS18B20_Read(data **FUNCTION** Return main funtion() Check_pin_ex_interrupt() Set_Pin_Input(DS18B20_Pin) Ready() Close_door() Close_valve() ➤ Return main funtion() Boiler_full =1 Select mode 1 ➤ Update_temperature() or Slect mode 2 Set_pin_output(DS18B20_Pin) Close_pump_rinse(` Wash_mode_funtion(HAL_GPIO_WritePin ($DS18B20_BOILER_Pin, 0$ TIMER INTERRUPT FUNCTION Door_pin Delay_us(1) Set_Pin_Input(DS18B20_Pin) Reset_pin Open_valve() HAL_GPIO_ReadPin $(DS18B\overline{20}_BOILER_Pin) = 0$ Tem_boiler >120 —**→** Lcd_display(Error 1) Delay_us(50) Tem_tank >120 CAPSTONE PROJECT Mode =2 DESIGN DISHWASHER FOR SMALL BUSINESSES sponsibility Name Return main funtion() FLOWCHART Return main funtion() ewer Dr. Vo Nhu Thanh Truong Van Vu

Scale:
Page: 01 Total of page: 01

THE UNIVERSITY OF DANANG University of Science and Technology

Faculty of Mechanical Engineering Class: 19CDTCLC2