**Self evaluation**

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| Your name: Ziyao Lu | Your TA: Brian |
| Your zID: z5340468 | Your group number: 4 |

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| **How often did you go to lectures? \_\_\_\_\_\_\_\_sometime\_\_\_\_\_\_\_\_\_\_**  **How often did you go to the labs? \_\_\_\_\_\_\_\_every time\_\_\_\_\_\_\_\_\_\_**  **On a scale of 0-10, how confident were you at working in VHDL? \_\_\_\_\_\_6\_\_\_\_\_\_\_**  **On a scale of 0-10, how confident were you at working in C? \_\_\_\_\_\_\_7\_\_\_\_\_\_\_\_** | |
| Task | Contribution 0 - did nothing  100 - did everything |
| Team organisation | 60 |
| M2 - Code writing | 90 |
| M2 - Debugging | 80 |
| M2 - Plan writing / proofreading | 0 |
| M2 - \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (optional extra) |  |
| M3 - Code writing | 85 |
| M3 - Debugging | 75 |
| M3 - Documentation | 0 |
| M3 - Diagrams | 0 |
| M3 - Report writing / proofreading | 0 |
| M3 - \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (optional extra) |  |
| M4 - Code writing | 85(for speech recognition) |
| M4 - Debugging | 95 (for speech recognition) |
| M4 - Project report writing / proofreading | 10 |
| M4 - Demo preparation and polish | 85(everything without ppt) |
| M4 - Code writing for audio mix (optional extra) | 0 |

Please justify in the space provided why you gave these scores to yourself (i.e. summarize the key information provided in your individual report).

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| I did all works on kria board, and cross compiling.  For all reports, I reviewed it but did not write it, because I think I had done enough on the coding.  I told that the situation in M2 is I basically did all coding, I wrote ws, fsm and fifo, and rewrote nearly all codes which stanley debugged.  After M2 deadline, here is a table for work divided:    For M3 code, I implement 16bit wave file generated, 32bit wave file generated, write date in frame to buffer. Without reverse\_bit function, I did mainly all debug works.  For M4 code speech recognition(What we're really done), Stanley only gave me code which can read sounds as strings from a wave file and print something’s simple via wake word Melody. So, I designed wake word for new functions(without when asking tomorrow and yesterday’s date function), implemented get a city’s yesterday, today or tomorrow’s weather, call up a timer, and all this function will be abled to use when we wake up Melody by “Hey Melody” and before we said goodbye to her. Melody's wake and sleep cycles can be repeated. |

**Group member evaluation**

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| Group member name: Stanley Yeung | |
| Their zID (if known): z5423210 | Your group number: |

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| **How often did they go to lectures? \_\_\_\_\_\_\_\_sometime \_\_\_\_\_\_\_\_\_\_**  **How often did they go to the labs? \_\_\_\_\_\_\_\_every time\_\_\_\_\_\_\_\_\_\_**  **On a scale of 0-10, how good were they at working in VHDL? \_\_\_\_\_\_2\_\_\_\_\_\_\_**  **On a scale of 0-10, how good were they at working in C? \_\_\_\_\_\_\_6\_\_\_\_\_\_\_\_** | |
| Task | Contribution 0 - did nothing  100 - did everything |
| Team organisation | 40 |
| M2 - Code writing | 10 |
| M2 - Debugging | 10 |
| M2 - Plan writing / proofreading | 50 |
| M2 - \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (optional extra) |  |
| M3 - Code writing | 15 |
| M3 - Debugging | 15 |
| M3 - Documentation | 60 |
| M3 - Diagrams | 40 |
| M3 - Report writing / proofreading | 50 |
| M3 - \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (optional extra) |  |
| M4 - Code writing | 15 (for speech recognition) |
| M4 - Debugging | 5 (for speech recognition) |
| M4 - Project report writing / proofreading | 50 |
| M4 - Demo preparation and polish | 5 |
| M4 - Code writing for audio mix (optional extra) | 60 |

Please justify in the space provided why you gave these scores to them:

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| For code:  Stanley did some help for coding, but not too much, he cannot use Vivado at home, so the code he's debugging at home doesn't even have the right syntax. For M3, his attempt to switch from 16bit to 32bit failed, and I'm on the main. c's debug made the wrong judgment, causing him to waste time. For M4, what he gives to me for speech recognition is just a template, no functions have been implemented.  In summary, I can only give these scores for his code section.  For report:  Stanley and Asher are in charge, it’s basically done by them. |

**Group member evaluation**

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| Group member name: Tsz Fung Chiang (Asher) | |
| Their zID (if known): z5449151 | Your group number: |

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| **How often did they go to lectures? \_\_\_\_\_\_\_\_often\_\_\_\_\_\_\_\_\_\_**  **How often did they go to the labs? \_\_\_\_\_\_\_\_ every time \_\_\_\_\_\_\_\_\_\_**  **On a scale of 0-10, how good were they at working in VHDL? \_\_\_\_\_\_unknown\_\_\_\_\_\_**  **On a scale of 0-10, how good were they at working in C? \_\_\_\_\_\_\_7\_\_\_\_\_\_\_\_** | |
| Task | Contribution 0 - did nothing  100 - did everything |
| Team organisation | 0 |
| M2 - Code writing | 0 |
| M2 - Debugging | 10 |
| M2 - Plan writing / proofreading | 50 |
| M2 - \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (optional extra) |  |
| M3 - Code writing | 0 |
| M3 - Debugging | 10 |
| M3 - Documentation | 40 |
| M3 - Diagrams | 60 |
| M3 - Report writing / proofreading | 50 |
| M3 - \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (optional extra) |  |
| M4 - Code writing | 0 (for speech recognition) |
| M4 - Debugging | 0 (for speech recognition) |
| M4 - Project report writing / proofreading | 50 |
| M4 - Demo preparation and polish | 50 |
| M4 - Code writing for audio mix (optional extra) | 40 |

Please justify in the space provided why you gave these scores to them:

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| For code:  Except for the reverse\_bit function in M3, I haven't seen any code from Asher, he may have helped Stanley, but I don't know the details.  For M4, audio mix is Stanley and Asher’s works. This feature is not really implemented, and I don't know the details.  For report:  Stanley and Asher are in charge, it’s basically done by them. |

**Group member evaluation**

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| Group member name: Zhihang Huang | |
| Their zID (if known): z5237095 | Your group number: |

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| **How often did they go to lectures? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **How often did they go to the labs? \_\_\_\_\_\_\_\_week1,3,4,5\_\_\_\_\_\_\_\_\_\_**  **On a scale of 0-10, how good were they at working in VHDL? \_\_\_\_\_\_0\_\_\_\_\_\_\_**  **On a scale of 0-10, how good were they at working in C? \_\_\_\_\_\_\_0\_\_\_\_\_\_\_\_** | |
| Task | Contribution 0 - did nothing  100 - did everything |
| Team organisation | 0 |
| M2 - Code writing | 0 |
| M2 - Debugging | 0 |
| M2 - Plan writing / proofreading | 0 |
| M2 - \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (optional extra) | 0 |
| M3 - Code writing | 0 |
| M3 - Debugging | 0 |
| M3 - Documentation | 0 |
| M3 - Diagrams | 0 |
| M3 - Report writing / proofreading | 0 |
| M3 - \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (optional extra) |  |
| M4 - Code writing | 0 |
| M4 - Debugging | 0 |
| M4 - Project report writing / proofreading | 0 |
| M4 - Demo preparation and polish | 0 |
| M4 - \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (optional extra) |  |

Please justify in the space provided why you gave these scores to them:

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| Here is the only work he did, this is entirely GPT generated code, I think he should not even know what it means.  Notice: he said it is his all i2s-master.vhdl  Never see him after week5 Tus lab.  library ieee;  use ieee.std\_logic\_1164.ALL;  use ieee.numeric\_std.ALL;  library work;  use work.aud\_param.all;  -- I2S master interface for the SPH0645LM4H MEMs mic  -- useful links:  -- - https://diyi0t.com/i2s-sound-tutorial-for-esp32/  -- - https://cdn-learn.adafruit.com/downloads/pdf/adafruit-i2s-mems-microphone-breakout.pdf  -- - https://cdn-shop.adafruit.com/product-files/3421/i2S+Datasheet.PDF  entity i2s\_master is  generic (  DATA\_WIDTH : natural := 32;  PCM\_PRECISION : natural := 18  );  port (  clk : in std\_logic;  clk\_1 : in std\_logic;  -- I2S interface to MEMs mic  i2s\_lrcl : out std\_logic; -- left/right clk (word sel): 0 = left, 1 = right  i2s\_dout : in std\_logic; -- serial data: payload, msb first  i2s\_bclk : out std\_logic; -- Bit clock: freq = sample rate \* bits per channel \* number of channels  -- (should run at 2-4MHz). Changes when the next bit is ready.  -- FIFO interface to MEMs mic  fifo\_din : out std\_logic\_vector(DATA\_WIDTH - 1 downto 0);  fifo\_w\_stb : out std\_logic; -- Write strobe: 1 = ready to write, 0 = busy  fifo\_full : in std\_logic -- 1 = not full, 0 = full  );  end i2s\_master;  architecture Behavioral of i2s\_master is  signal sample : std\_logic\_vector(DATA\_WIDTH-1 downto 0) := (others => '0');  signal bit\_counter : integer := 0;  signal write\_fifo : std\_logic := '0';  signal i2s\_bclk\_internal: std\_logic := '0'; -- Internal signal to track i2s\_bclk value  begin  process(clk)  begin  if rising\_edge(clk) then  if i2s\_bclk\_internal = '1' then  sample <= sample(DATA\_WIDTH-2 downto 0) & i2s\_dout;  bit\_counter <= bit\_counter + 1;  if bit\_counter = DATA\_WIDTH then  write\_fifo <= '1';  bit\_counter <= 0;  else  write\_fifo <= '0';  end if;  end if;  end if;  end process;  fifo\_w\_stb <= write\_fifo and not fifo\_full;  fifo\_din <= sample;  process(clk\_1)  begin  if rising\_edge(clk\_1) then  i2s\_bclk\_internal <= not i2s\_bclk\_internal; -- Toggle i2s\_bclk\_internal  i2s\_bclk <= i2s\_bclk\_internal; -- Assign internal value to the output  end if;  end process;  i2s\_lrcl <= '0'; -- Since we're dealing with mono microphone, this signal can be kept '0' for left channel.  end Behavioral; |