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| **THIẾT KẾ HỆ THỐNG SỐ VỚI HDL**  Instructor: Hồ Ngọc Diễm  Student's name:   1. Phan Tuấn Đạt - 21521950 2. Nguyễn Tiến Ngọc - |

**BÀI THỰC HÀNH SỐ 4\_5\_6**

1. **BÀI THỰC HÀNH SỐ 4: KIỂM TRA THIẾT KẾ SỬ DỤNG TESTBENCH**
2. **Câu 1:**

**A screenshot of a computer

Description automatically generated**

* **Code:**

**A screenshot of a computer code

Description automatically generated**

* **Testbench:**

**A screenshot of a computer program

Description automatically generated**

**A white background with blue and black text

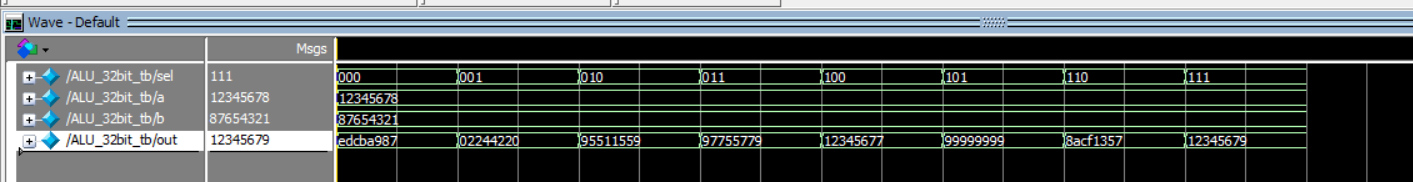
Description automatically generated**

* **Kết quả mô phỏng:**
* **Transcripts:**

**A computer code with numbers

Description automatically generated**

* **Waves:**

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1. **Câu 2:**

**A close up of a text

Description automatically generated**

* **Code:**

**A screenshot of a computer

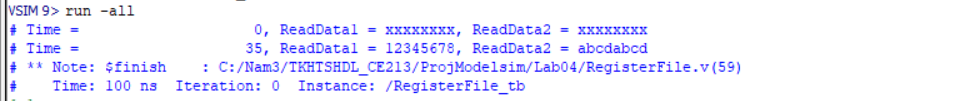
Description automatically generated**

* **Testbench:**

**A screenshot of a computer

Description automatically generated**

* **Kết quả mô phỏng**
* **Transcripts**

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* **Waves**

**A screenshot of a computer

Description automatically generated**

1. **Câu 3:**

**A close up of text

Description automatically generated**

* **Code**

**A screenshot of a computer program

Description automatically generated**

* **Testbench**

**A white rectangular frame with colorful text

Description automatically generated with medium confidence**

* **Kết quả mô phỏng**
* **Transcripts**

**A close-up of a list

Description automatically generated**

* **Waves**

**A screenshot of a video game

Description automatically generated**

1. **Câu 4:**

**A diagram of a ram

Description automatically generated**

* **Code**

**A screen shot of a computer code

Description automatically generated**

* **Testbench**

**A screenshot of a computer

Description automatically generated**

**A close-up of a computer screen

Description automatically generated**

* **Kết quả mô phỏng**
* **Transcripts**

**A close-up of a computer code

Description automatically generated**

* **Waves**

**A screenshot of a computer

Description automatically generated**

1. **BÀI THỰC HÀNH SỐ 5: THIẾT KẾ DATAPATH ĐƠN GIẢN**
2. **Các khối trong Datapath:**
3. **Testbench:**
4. **Kết quả mô phỏng:**

* **Transcripts**
* **Waves**

1. **BÀI THỰC HÀNH SỐ 6: THIẾT KẾ CONTROL UNIT ĐƠN GIẢN**
2. **ALU Control Unit:**
3. **Control Unit:**
4. **Testbench:**
5. **Kết quả mô phỏng:**

* **Transcripts:**
* **Waves:**
* **Processor:**

1. **Code**
2. **Testbench:**
3. **Kết quả mô phỏng:**

* **Transcripts:**
* **Waves:**