1. How many commands does the execution unit have?

Name: Abdelrahman Hamdy Ahmed

Sec: 1 BN: 36

**6 commands**

* Move Value to Register
* Move Register to Register
* Add Value to Register
* Add Register to Register
* AND Value to Register
* AND Register to Register

**Valid: 2^4 \* 3 \* 3 \* 2^2 = 576**

**Forbidden: 2^10 – 576 = 448**

1. How many bits are required for the user input command?

**10 bits**

**2 bits operation | 2 bits destination | 2 bits source | 4 bits value if specified**

1. How many forbidden input commands do execution unit have? Give an example.

**Forbidden inputs include the operation having 01 – because we only have 3 operations (Move 00 / Add 10 / AND 11)**

**And also the destination having 11 – because we only have 3 registers (A 00 / B 01 / C 10) but the source has an extra option which is value (11).**

**EXAMPLE:**

**0100111010 X**