

Example

- Students must fulfil a **final project** they must choose among an offer of five projects p_1, p_2, p_3, p_4, p_5

Exercise

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- Students must fulfil a **final project** they must choose among an offer of five projects $p1, p2, p3, p4, p5$
- Students a, b, c, d, e were allowed to express **their preferences** of 4 projects, providing the table:

Student	Preferences
a	$p1 > p3 > p5 > p2$
b	$p1 > p5 > p3 > p2$
c	$p5 > p1 > p2 > p4$
d	$p4 > p3 > p1 > p2$
e	$p4 > p3 > p1 > p2$

- A student cannot be assigned a project she didn't choose

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- A student cannot be assigned a project she didn't choose
- Find optimal solutions that **agree with the overall preferences**

Example

- Students with higher **Grade Point Average** (GPA) have priority
- The obtained GPAs were:
 $a = 9, b = 9, c = 8, d = 7, e = 7$
- Find optimal solutions that satisfy first the preferences of **students with higher GPA's**, but still agree with everybody's preferences when GPAs are equal.