Instructions - Mechanism G

This is an experiment in the economics of decision making. The instructions are simple, and if you follow them carefully and make good decisions, you might earn a considerable amount of money. In this experiment, we simulate a procedure to allocate students to schools. The procedure, payment rules, and student allocation method are described below. Do not communicate with each other during the experiment. If you have questions at any point during the experiment, raise your hand and the experimenter will help you.

Procedure

- There are 36 participants in this experiment. You are participant #1.
- In this simulation, 36 school slots are available across seven schools. These schools differ in size, geographic location, specialty, and quality of instruction in each specialty. Each school slot is allocated to one participant. There are three slots each at schools A and B, and six slots each at schools C, D, E, F and G.
- **Your payoff** amount depends on the school slot you hold at the end of the experiment. Payoff amounts are outlined in the following table. These amounts reflect the desirability of the school in terms of location, specialty and quality of instruction.

Slot received at School:	A	B	C	D	E	F	G
Payoff to Participant #1 (in dollars)	13	16	9	2	5	11	7

  The table is explained as follows:

  - You will be paid $13 if you hold a slot at school A at the end of the experiment.
  - You will be paid $16 if you hold a slot at school B at the end of the experiment.
  - You will be paid $9 if you hold a slot at school C at the end of the experiment.
  - You will be paid $2 if you hold a slot at school D at the end of the experiment.
  - You will be paid $5 if you hold a slot at school E at the end of the experiment.
  - You will be paid $11 if you hold a slot at school F at the end of the experiment.
  - You will be paid $7 if you hold a slot at school G at the end of the experiment.

  ***NOTE* different participants might have different payoff tables.** That is, payoff by school might be different for different participants.

- During the experiment, each participant first completes the Decision Sheet by indicating school preferences. The Decision Sheet is the last page of this packet. Note that you need to rank all seven schools in order to indicate your preferences.
- After all participants have completed their Decision Sheets, the experimenter collects the Sheets and starts the allocation process.
- Once the allocations are determined, the experimenter informs each participants of his/her allocation slot and respective payoff.

Allocation Method

- In this experiment, participants are defined as belonging to the following school districts.
  - Participants #1 - #3 live within the school district of school A,
  - Participants #4 - #6 live within the school district of school B,
  - Participants #7 - #12 live within the school district of school C,
  - Participants #13 - #18 live within the school district of school D,
  - Participants #19 - #24 live within the school district of school E,
  - Participants #25 - #30 live within the school district of school F,
  - Participants #31 - #36 live within the school district of school G.
- A priority order is determined for each school. Each participant is assigned a slot at the **best possible** school reported in his/her Decision Sheet that is consistent with the priority order below.
- The priority order for each school is separately determined as follows:
  - **High Priority Level:** Participants who live within the school district.
    Since the number of High priority participants at each school is equal to the school capacity, each High priority participant is guaranteed an assignment which is at least as good as his/her district school based on the ranking indicated in his/her Decision Sheet.
  - **Low Priority Level:** Participants who do not live within the school district.
    The priority among the Low priority students is based on their respective order in a fair lottery. This means each participant has an equal chance of being the first in the line, the second in the line, $\cdots$, as well as the last in the line. To determine this fair lottery, a participant will be asked to draw 36 ping pong balls from an urn, one at a time. Each ball has a number on it, corresponding to a participant ID number. The sequence of the draw determines the order in the lottery.
- Once the priorities are determined, the allocation of school slots is obtained as follows:
  - An application to the first ranked school in the Decision Sheet is sent for each participant.
  - Throughout the allocation process, a school can hold no more applications than its number of slots.
    If a school receives more applications than its capacity, then it rejects the students with lowest priority orders. The remaining applications are retained.
  - Whenever an applicant is rejected at a school, his application is sent to the next highest school on his Decision Sheet.
  - Whenever a school receives new applications, these applications are considered together with the retained applications for that school. Among the retained and new applications, the lowest priority ones in excess of the number of the slots are rejected, while remaining applications are retained.
  - The allocation is finalized when no more applications can be rejected.
    Each participant is assigned a slot at the school that holds his/her application at the end of the process.

An Example:

We will go through a simple example to illustrate how the allocation method works.

Students and Schools: In this example, there are six students, 1-6, and four schools, Clair, Erie, Huron and Ontario.

Student ID Number: $1, 2, 3, 4, 5, 6$	Schools: Clair, Erie, Huron, Ontario

Slots and Residents: There are two slots each at Clair and Erie, and one slot each at Huron and Ontario. Residents of districts are indicated in the table below.

School	Slot 1	Slot 2	District Residents
Clair	☐	☐	1 2
Erie	☐	☐	3 4
Huron	☐		5
Ontario	☐		6

Lottery: The lottery produces the following order.

$1 - 2 - 3 - 4 - 5 - 6$

Submitted School Rankings: The students submit the following school rankings:

	1st Choice	2nd Choice	3rd Choice	Last Choice
Student 1	Huron	Clair	Ontario	Erie
Student 2	Huron	Ontario	Clair	Erie
Student 3	Ontario	Clair	Erie	Huron
Student 4	Huron	Clair	Ontario	Erie
Student 5	Ontario	Huron	Clair	Erie
Student 6	Clair	Erie	Ontario	Huron

Priority : School priorities first depend on whether the school is a district school, and next on the lottery order:

	Resident	Non-Resident
Priority order at Clair:	**1, 2**	– 3 – 4 – 5 – 6
Priority order at Erie:	**3, 4**	– 1 – 2 – 5 – 6
Priority order at Huron:	**5**	– 1 – 2 – 3 – 4 – 6
Priority order at Ontario:	**6**	– 1 – 2 – 3 – 4 – 5

The allocation method consists of the following steps:

Step 1 : Each student applies to his/her **first choice**: students 1, 2 and 4 apply to Huron, students 3 and 5 apply to Ontario, and student 6 applies to Clair.

- Clair holds the application of student 6.
- Huron holds the application of student 1 and rejects students 2 and 4.
- Ontario holds the application of student 3 and rejects student 5.

Applicants		School		Hold	Reject
6	⟶	Clair	⟶	[6] [ ]	
	⟶	Erie	⟶	[ ] [ ]	
1, 2, 4	⟶	Huron	⟶	[1] –	2, 4
3, 5	⟶	Ontario	⟶	[3] –	5

Step 2 : Each student rejected in Step 1 applies to his/her next choice: student 2 applies to Ontario, student 4 applies to Clair, and student 5 applies to Huron.

- Clair considers the application of student 4 together with the application of student 6, which was on hold. It holds both applications.
- Huron considers the application of student 5 together with the application of student 1, which was on hold. It holds the application of student 5 and rejects student 1.
- Ontario considers the application of student 2 together with the application of student 3, which was on hold. It holds the application of student 2 and rejects student 3.

Hold	New applicants		School		Hold	Reject
[6] [ ]	4	⟶	Clair	⟶	[6] [4]	
[ ] [ ]		⟶	Erie	⟶	[ ] [ ]	
[1] –	5	⟶	Huron	⟶	[5] –	1
[3] –	2	⟶	Ontario	⟶	[2] –	3

Step 3 : Each student rejected in Step 2 applies to his/her next choice: Students 1 and 3 apply to Clair.

- Clair considers the applications of students 1 and 3 together with the applications of students 4 and 6, which were on hold. It holds the applications of students 1 and 3 and rejects students 4 and 6.

Hold	New applicants		School		Hold	Reject
[6] [4]	1, 3	⟶	Clair	⟶	[1] [3]	4, 6
[ ] [ ]		⟶	Erie	⟶	[ ] [ ]	
[5] –		⟶	Huron	⟶	[5] –	
[2] –		⟶	Ontario	⟶	[2] –	

Step 4 : Each student rejected in Step 3 applies to his/her next choice: Student 4 applies to Ontario and student 6 applies to Erie.

- Ontario considers the application of student 4 together with the application of student 2, which was on hold. It holds the application of student 2 and rejects student 4.
- Erie holds the application of student 6.

Hold	New applicants		School		Hold	Reject
[1] [3]		⟶	Clair	⟶	[1] [3]	
[ ] [ ]	6	⟶	Erie	⟶	[6] [ ]	
[5] –		⟶	Huron	⟶	[5] –	
[2] –	4	⟶	Ontario	⟶	[2] –	4

Step 5 : Each student rejected in Step 4 applies to his/her next choice: student 4 applies to Erie.

- Erie considers the application of student 4 together with the application of student 6, which was on hold. It holds both applications.

Hold	New applicants		School		Hold	Reject
[1] [3]		⟶	Clair	⟶	[1] [3]	
[6] [ ]	4	⟶	Erie	⟶	[6] [4]	
[5] –		⟶	Huron	⟶	[5] –	
[2] –		⟶	Ontario	⟶	[2] –	

No application is rejected at Step 5. Based on this method, the final allocations are:

Student	1	2	3	4	5	6
School	Clair	Ontario	Clair	Erie	Huron	Erie

You will have 15 minutes to go over the instructions at your own pace, and make your decisions. Feel free to earn as much cash as you can. Are there any questions?

Decision Sheet - Mechanism G

- Recall: You are participant #1 and you live within the school district of School A.
- Recall: **Your payoff** amount depends on the school slot you hold at the end of the experiment. Payoff amounts are outlined in the following table.

School:	A	B	C	D	E	F	G
Payoff in dollars	13	16	9	2	5	11	7

You will be paid \$13 if you hold a slot of School A at the end of the experiment.
You will be paid \$16 if you hold a slot of School B at the end of the experiment.
You will be paid \$9 if you hold a slot of School C at the end of the experiment.
You will be paid \$2 if you hold a slot of School D at the end of the experiment.
You will be paid \$5 if you hold a slot of School E at the end of the experiment.
You will be paid \$11 if you hold a slot of School F at the end of the experiment.
You will be paid \$7 if you hold a slot of School G at the end of the experiment.

Please write down your ranking of the schools (A through G) from your first choice to your last choice. Please rank ALL seven schools.

1st choice	2nd choice	3rd choice	4th choice	5th choice	6th choice	last choice

Your I.D : #1 **Your Name** (print):_____

This is the end of the experiment for you. Please remain seated until the experimenter collects your Decision Sheet.

After the experimenter collects all Decision Sheets, a participant will be asked to draw ping pong balls from an urn to generate a fair lottery. The lottery, as well as all participants' rankings will be entered into a computer after the experiment. The experimenter will inform each participants of his/her allocation slot and respective payoff once it is computed.

Session Number : 1 Mechanism 2 Payoff Matrix 1