This project is designed to have you apply the voting methods we’ve learned in class in a real-life setting. You are to work in groups of three to five students. You will create a survey and have real people take your survey. You will then analyze the results using specified voting methods, and provide a full report. The survey can be nearly anything you like (subject to approval by Dr. Whitaker).

**Project Components and deadlines:**

1. **Group formation:** Groups of three to five must be formed by **Tuesday October 7**th.
2. **Project proposals** must be turned in by **Thursday October 30**th.
3. **Final reports** must be turned in as a hardcopy (one per group) by **Thursday November 20**th. They must also be uploaded by every individual student to Blackboard.

**Survey requirements**

1. Must consist of exactly 4 options (candidates) which are to be ordered according to preference.
2. Must be given to at least 100 different people. This can be given either electronically or with paper ballots. If online, you’ll need to provide a link to the survey.
3. Results are to be summarized in a preference schedule.
4. Be informative and creative. We want to learn something interesting, whether it’s something fun or something serious.
5. Be clean and civil. If you’d be embarrassed to show your survey to anyone’s grandmother, you should probably try again.

**Voting Methods Used**

1. Plurality
2. Borda Count
3. Pairwise Comparisons
4. Plurality with Elimination
5. Invented Method – you will come up with a new voting method of your own, explain how it works and implement it.

**Group formation (5 points): Due October 7**th

- **Your group must have between three and five people.** It cannot have one, two, six, seven or other numbers of people.
- You should write down your group members’ names and student ID numbers to turn in.
- Your group will be assigned a Group Number that you should include on your proposal and final report. Alternatively, you can think of a name for your group (e.g., “Aliens in Atlanta”). If you don’t name your group, you’ll be assigned a number.
- If you are having trouble finding a group, send me an email by **October 1**st and I will help you find one.
- Late penalty: 1 point for each day late
Proposal (10 points): Due October 30th

- Each group will turn in one proposal no later than Thursday October 30th.
- Your proposal should include the following:
  - Your group’s name or number
  - A short description of your planned polling method
  - A draft of the survey you intend to use
  - A description of the invented voting method you intend to use (with a worked out example).
- Once your proposal is approved, you can begin collecting votes. It is okay to turn in your proposal early!
- Late penalty: 2 points for each day late

Final Report (35 points): Due November 20th

The final report is due on Thursday November 20th in class. It should also be uploaded to every group member’s Blackboard (instructions will be provided later), but the grade will be based on the hardcopy you turn in. Submissions should be for the most part typed and available in electronic format (.pdf, .doc, etc.)

The report consists of the following five things:

1. Cover Page. Includes your group name/number, every group member’s name, and a title for your report. (3 points)

2. Survey. This page includes the survey question, the survey options, the total number of people surveyed, and the preference schedule of the voting results. You should also explain how the method you used to collect the votes (paper ballots given out where? online survey of what type?). (5 points)

3. Results (10 points total)
   a. Give results with plurality
   b. Give results with plurality with elimination, including the order in which choices were eliminated
   c. Borda Count results, which includes the computation of Borda points for each choice
   d. Pairwise Comparison, which includes the results of each head-to-head matchup
   e. Invented method: explain how your method works and show any necessary computations to get the result for your election

4. Summary / Analysis (12 points)
   Answer the following four questions:
   a. What conflicts (if any) were there between the various voting methods? Did the same option win every time?
   b. What can you tell about your invented voting method in terms of the fairness criteria we discussed in class?
c. Were you surprised by the results of your survey? Which voting method do you think best applied in your case?

d. What changes would you make in your polling method or survey if you did this again, and why? (If you would not make any changes, explain why.)

5. Equitability Statement and Signatures (3 points)

You have two options here. No matter which you choose, all of your group members must sign below the statement.

Option 1 (most groups): Have a statement like the following: “Each member of our group contributed a fair share, and we should all earn the same grade.”

Option 2: If, for whatever reason, there was significant difference in contribution of the group members, you can choose to give the relative percentages of contribution. The total must add to 100%.

(For example, in a (fictional) group of four people, Dominic did way more than his share of the work, so they might turn in: Dominic 40%, Annie 20%, Eddie 20%, Barclay 20%. Or, in a fictional group of 5 people, Larry only came to one meeting and didn’t really help, so they turned in Randy 23%, Yolanda 23%, Jane 23%, Ginny 23%, Larry 8%). If you choose this option, your grades will be based on a pooled point system.

Two or more additional points will be awarded for style, entertainment value, creativity, and thoughtfulness.

Late penalty:

- Full credit on Thursday November 20th.
- 2 points off if turned in on/by Tuesday November 25th.
- 7 additional points off per day for each day after November 25th.

Note: It is a UK (University) requirement that each person upload their project to Blackboard. However, your grade will be based only on the paper copy you turn in.