In the name of God

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Advanced Programming

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Project Description

This Java code implements a simple voting system in which users can create votings, add options, and vote anonymously or with identification. The code consists of four Java classes: Person, Vote, Voting, and VotingSystem, and a main class called Main.

Models

Person

Vote

Voting

VotingSystem

Main

Person Class

This class represents a person with a first and last name. It only provides getters for both fields.

Fields

- `private String firstName;`
- `private String lastName;`

Methods

- `public String getFirstName();`
- `public String getLastName();`
- `public String toString();`

Vote Class

This class represents a vote by a specific user (Person) for a particular option (date). The class provides access to the voter and the date of the vote. The class overrides the equals and hashCode methods for equality comparison.

Fields

- `private final Person voter;`
- `private final String date;`

Methods

- `public Person getVoter();`
- `public String getDate();`

Voting Class

This class represents a voting with a question, a set of options (choices), and a list of registered voters. It provides methods to add new options, vote for an option (with or without identification), and print the voting results. The class overrides the equals method for equality comparison.

Fields

- `private int type;`
- `private String question;`
- `private HashMap<String, HashSet<Vote>> choices;`
- `private boolean isAnonymous;`
- `private ArrayList<Person> voters;`

Methods

- `public String getQuestion();`
- `public void setQuestion(String question);`
- `public ArrayList<String> getChoices();`
- `public void createChoice(String choice);`
- `public void vote(Person voter, ArrayList<String> voterChoices);`
- `public void printResult();`
- `public void printVoters();`

VotingSystem Class

This class represents the system responsible for managing the votings. It provides methods to create new votings, access them by index, print their results, print voters, and vote. This class holds an ArrayList of Voting objects.

Fields

- `private ArrayList<Voting> votingList;`

Methods

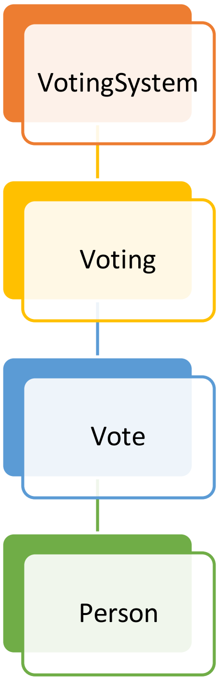
- `public Voting getVoting(int index);`
- `public ArrayList<Voting> getVotingList();`
- `public void createVoting(String question, boolean isAnonymous, int type, ArrayList<String> choices);`
- `public void printResult(int index);`
- `public void printVoters(int index);`
- `public void printVoting(int index);`
- `public void vote(int index, Person voter, ArrayList<String> choices);`

Main Class

This class provides a main method to run the voting system with some sample data. The main method creates several Person objects and adds them to different votings using the VotingSystem. It also prints some information related to the votings and their results.

Conclusion

This code implements a basic framework for a voting system, allowing the creation of votings, the addition of options, and the collection of anonymous or identified votes. The VotingSystem provides a simple interface to access and manage the votings. The code could be extended to include more features, such as time limits, restrictions on the number of votes, and more advanced analysis of the voting results.


VotingSystem
Voting
Vote
Person