Felipe Lima - 109290055

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| ElectoralMap | calls |
| ElectoralMap(); |  |
| static *ElectoralMap*& GetInstance() | ElectoralMap(); |
| ElectoralMap(*ElectoralMap* const&); |  |
| void operator=(*ElectoralMap* const&); |  |
| void InsertDistrict(*District* &*d*); |  |
| District get\_district(int id) |  |
| int GetMapSize() |  |
| operator<< |  |
| Fields/Attributes: | std::map<int, District> districts\_;  std::map<int, *District*> :: iterator it;  int map\_size\_; |

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| District | calls |
| District() | *ElectoralMap*::GetInstance()  GetMapSize()  AreaGenerator() |
| int AreaGenerator(); |  |
| int get\_area() |  |
| int get\_constituents(Party &p) |  |
| void MoveConstituents(Party &p1, Party &p2) |  |
| operator<< |  |
| Fields/Attributes: | std::*string* district\_name\_;  int district\_id;  int area\_;  std::map<Party, int> constituents\_; |

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| TextUI | calls |
| ElectionType() |  |
| RegisterCandidates() | Election::RegisterCandidates() |
| CandidatesCampaining() | Campaign() |
| PrintCandidates() |  |
| PrintResults() | Election::CalculateVotes()  RepresentativeElection::CalculateVotes() |
| Fields/Attributes: | std::string election\_type\_  static bool end\_election; |

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| Party | calls |
| enum class | no calls |

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| Candidate | calls |
| struct | no calls |
| Fields/Attributes: | std::string name;  Party party\_affiliation;  int id; |

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| Election | calls |
| RegisterCandidates() |  |
| void Campaign() | District::MoveConstituents(Party &p1, Party &p2) |
| CalculateVotes() | District:: get\_constituents(Party &p) |

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| RepresentativeElection | calls |
| CalculateVotes() | District:: get\_constituents(Party &p) |

int main.cpp

int main(){

TextUI ui;

while (end\_election == 0){

ui.ElectionType();

ui.RegisterCandidates();

ui.CandidatesCampaining();

ui.PrintCandidates();

ui.PrintResults();

}

}

// main goes in a loop until user selects to exit program.

// only calls Ui because all the other calls are handled by the methods in TextUI