hello. I am creating a game "Anti Plague" in java language using swing library. I have a world map, it consist 10 regions. each region has unique population, regions have bounds between each other, but not each of each. bounds have different travel coefficient (plane, ship, car they bring different count of people). computer works like virus, it spreads virus. user should do everything to save people. for this user can reduce spread using different options (push checkboxes(vaccine, make people use masks, make people do remote work, quarantine), user can influence count of hospitals from 1- 9, also user can block travel ways between countries by pushing checkbox) computer should spread virus user should resist this virus. I count infected population, cured population, died population I wanna add functionality money, when user will want to treatment people, user will spend money. when people are curing, user earn money. please help me to create idea how to spend and earn money

Creating a money system in your game "Anti Plague" adds an interesting layer of strategy and resource management. Here's a detailed idea on how to implement earning and spending money in your game:

**Earning Money**

1. **Healthy Population Contribution**:
   * Each region generates income based on its healthy population (not infected, not dead).
   * Formula: Income = Healthy Population \* Income Rate
   * The Income Rate can be a fixed value or vary based on the region's economic status.
2. **Cured Population Bonus**:
   * When infected people are cured, the user earns a bonus.
   * Formula: Bonus = Cured Population \* Cure Bonus Rate
   * This encourages the player to focus on curing infected people.
3. **Taxes from Remote Work**:
   * If the player enforces remote work (via a checkbox), they earn a small tax income.
   * Formula: Tax Income = Population \* Remote Work Tax Rate
4. **Tourism Income (Optional)**:
   * If travel between regions is not blocked, the player earns tourism income.
   * Formula: Tourism Income = Travel Coefficient \* Tourism Rate

**Spending Money**

1. **Building Hospitals**:
   * Each hospital costs money to build and maintain.
   * Formula: Cost = Base Hospital Cost + (Number of Hospitals \* Maintenance Cost)
   * Hospitals increase the cure rate but are expensive.
2. **Vaccines**:
   * Vaccines cost money to distribute to the population.
   * Formula: Cost = Population \* Vaccine Cost Rate
   * Vaccines reduce the spread of the virus.
3. **Masks**:
   * Distributing masks costs money.
   * Formula: Cost = Population \* Mask Cost Rate
   * Masks reduce the spread of the virus but are cheaper than vaccines.
4. **Quarantine Enforcement**:
   * Enforcing quarantine costs money (e.g., police, supplies).
   * Formula: Cost = Population \* Quarantine Cost Rate
   * Quarantine significantly reduces the spread but is expensive.
5. **Blocking Travel**:
   * Blocking travel between regions costs money (e.g., setting up checkpoints).
   * Formula: Cost = Travel Coefficient \* Blocking Cost Rate
   * Blocking travel reduces the spread but also reduces tourism income.
6. **Treatment Costs**:
   * Treating infected people costs money (e.g., medicine, hospital beds).
   * Formula: Cost = Infected Population \* Treatment Cost Rate
   * This is a recurring cost as long as people are infected.

**Balancing Money**

* **Income vs. Expenses**:
  + Ensure that the player has enough income to cover basic expenses but must make strategic decisions to save money or invest in long-term solutions.
* **Scaling Costs**:
  + As the game progresses, increase the cost of actions (e.g., vaccines become more expensive as the virus mutates).
* **Emergency Funds**:
  + Allow the player to take loans or emergency funds, but with a penalty (e.g., reduced income for a few turns).

**Example Gameplay Loop**

1. The player starts with a fixed amount of money.
2. Each turn, the player earns money from healthy and cured populations.
3. The player spends money on hospitals, vaccines, masks, quarantine, or blocking travel.
4. The virus spreads, and the player must balance spending money on prevention vs. treatment.
5. If the player runs out of money, they lose the game.

**Implementation Tips**

* Use a Money class to handle all money-related calculations.
* Display the player's current money balance prominently on the screen.
* Add tooltips or descriptions to show the cost of each action before the player selects it.
* Use events or pop-ups to notify the player when they are running low on money.

This system will make your game more engaging and challenging, as players must carefully manage their resources to save the population while resisting the virus. Good luck with your game development!