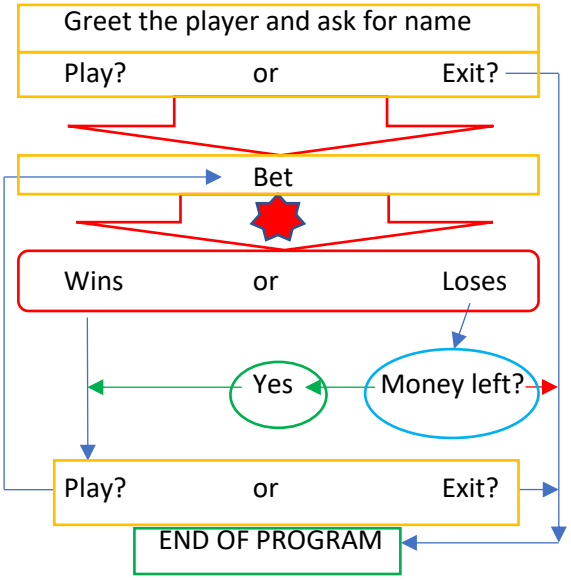
SAE921-GRP4100-CPlusPlus-Class-SStyles

Written analysis

DiceGame_001:

Game round: (Schema)



1st Scenario:
All in (5 CHF). Dice roll 2+3 = 5 (7) Loses, End of Program.
2nd Scenario:
All in (5 CHF). Dice roll 5+5 = 10 (7) Wins.
All in (10 CHF). Dice roll 4+3 = 7 (10) Loses, End of Program.

Dice roll =>

PlayerInput =>

Program execution =>

Conditional decision =>

Total game sequence:

- Greet the player and ask for a name. Announce money value in the given currency.
- Ask the player if he wants to play of exit program (game). Launch game loop on play.
- Ask for bet. (Only correct answers admitted).
- Launch dice roll and output dices' scores and the sum of both.
- Compare dices' sum to goal (initially 7). Lose or Win. Output players balance.
- Loss case: if no money left, exit. If not, ask player if he wants to play again.
- Win case: double bet and add to balance, set current and min Score to totalScore value. Output balance amount and ask if player wants to play again.
- Exit or Replay.

Necessary libraries, variables, and functions:

Libraries:

<iostream>, <cstdlib>, <ctime>, <string>.

Variables:

std::string:

playerName, currency, yesOrNo.

int:

balance, bet, dice1, dice2minScore, currentScore, totalScore.

bool:

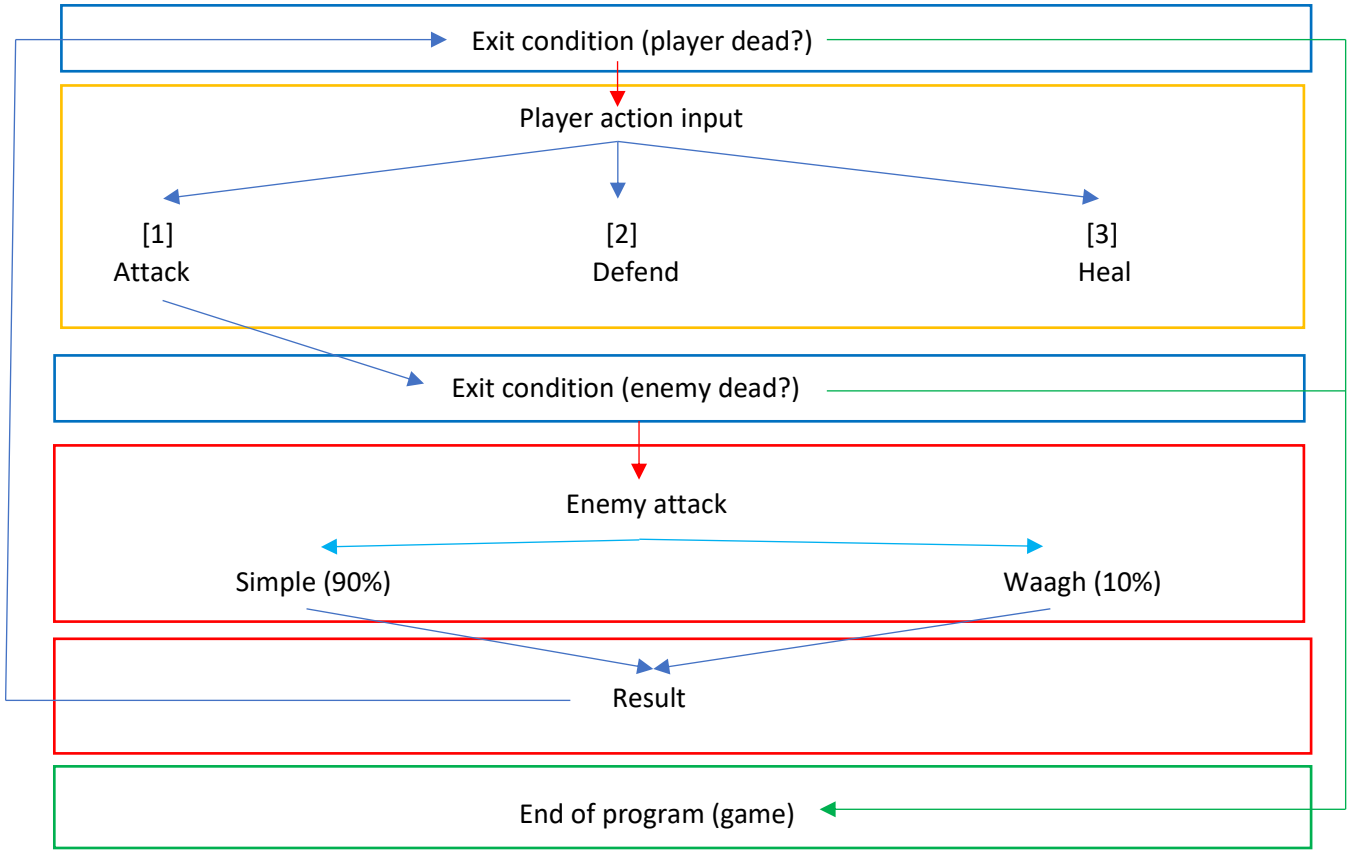
-isPlaying,

Functions:

std::getline(); std:cin.clear(); std::cin.ignore(); srand(); time(); rand();

DiceGame_DragonVariant:

Game round of the two players: (Schema)



Total game sequence:

-Greet the player and give context.
- Ask the player if he wants to play of exit the program (game). Launch game loop on play.

- Check for player's health (exit condition).
- Show state of the game (life of each character). Ask for player input (actions) Attack [1], Defend [2], Heal [3].
- Do the selected action. Stop player turn. Launch enemy turn.
- Check for enemy's health (exit condition).
- Show state of the game (life of each character). Enemy attacks with a 10% chance of doubling damage.
- Restart game loop until exit conditions are true.

Necessary libraries, variables, and functions:

Libraries:

<iostream>, <cstdlib>, <ctime>, <string>

Variables:

2 classes:

class Player & class Enemy

std:string:

Player:

name, description.

Enemy:

name, description.

main():

separationLine, yesOrNo.

int:

Player :

health, attackValue, healValue, action.

Enemy:

health, attackValue.

main():

randomRange, randomOffset, probability.

bool:

Player:

isDefending.

main():

isGame, isPlayerTurn, isNpcTurn.

Functions:

ConsoleClear() (ex: system("cls"); std::cin.clear(); std::cin.ignore(); srand(); time(); rand();