



## Player

```
- name: string
- symbol: char
- momey: int
- total_cup: static int
- cup: int
- place: int
- own_num: int
- Rnum: int
- Gnum: int
- own: int [32]
- die: bool
- lose: bool
- map: Map *
- send: bool
- test: bool
- outer: bool
- auc: bool
- DCCount: int

+ setmap(Map &): void
+ gettest(): bool
+ set_die(): void
+ set_lose(): void
+ print_name(): void
+ getname(): string
+ check_havebuilding(int): bool
+ check_lose(): bool
+ check_die(): bool
+ getchar(): char
+ add_money(int): void
+ sub_money(int): void
+ add_cup(): void
+ sub_cup(): void
+ getMoney(): int
+ getCups(): int
+ getAsset(): int
+ mortgage(int): void
+ unmortgage(int): void
+ add_building(int): void
+ sub_building(int): void
+ move(int):void
+ getTcup():int
+ getMap(): Map *
+ getLoc(): int
+ setsend(bool): void
+ getsend(): bool
+ print_ownbuilding(): void
+ settest(): void
+ getDC(): int
+ setDC(int): void
+ setplace(int): void
+ getout():bool
+ etout(bool): void
+ getauc(): bool
+ setauc(bool): void
+ getownnum(): int
+ getGnum(): int
+ getRnum(): int
+ makeownnarr(map<int,int>):
void
```

## Game

```
- num_player: int
- players: Player * [8]
- now_play: int

+ roll(int): int
+ loop(): void
+ get_nowplay(): int
+ start_new(Map &): void
+ load_player(istream &, Map &): void
+ getassets(): void
+ getname(): string
+ getname(int): string
+ getchar(): char
+ getchar(int): char
+ getcup(int): int
+ getmoney(int): int
+ getmoney(): int
+ getposition(int): int
+ getDC(int): int
+ setDC(int, int): void
+ add_player(string,char,Map &): void
+ add_player(string,char,int,int,int,Map&): void
+ trade_money(string,string,int,int): void
+ trade_building(string,string,int,int): void
+ next(): void
+ lswin(): bool
+ print_numplayer(): void
+ getLoc(): int
+ get_numplayer(): int
+ reset_nowplay(): void
+ print_winer(): void
+ mortgage(int): void
+ unmortgage(int): void
+ getnump(): int
+ getnplay(): int
+ makearray(int): map<int, Player *>
+ getplayer(string): Player *
+ setbuilding(string,int): void
+ setlose(): void
+ getnplayer(): Player *
+ start_new(Map &, bool, int): void
+ start_new(Map &, int): void
+ getassets(bool): void
+ add_player(string,char,Map&,bool):void
+ check_havebuilding(int): bool
+ check_havebuilding(int,string): bool
```

## Ownable

```
- mort: bool
- monopoly: bool
- owner: Player*
- block: string
- blockmen: Building[4]

+ virtual getowner(): Player *
+ virtual setowner(Player &) : void
+ virtual getCost(): int
+ virtual addCost(int): void
+ virtual subCost(int): void
+ virtual getPay(): int
+ virtual setPay(int): void
+ virtual getmort(): bool
+ virtual improve(): void
+ virtual ntimprove(): void
+ virtual lsmonopoly(): bool
+ virtual setmonopoly(bool): void
+ virtual setunmonopoly(): void
+ virtual getlevel(): int
+ virtual addmem(Building): void
+ virtual getblock(): string
+ virtual getblockcap(): string
+ virtual buy(Player &): void
+ virtual auction(int, int, char, int, int, map<int
    Player*>, Building*, map<int, int>):void
+ virtual change(Player&): void
+ virtual setload(int): void
+ virtual setblock(string): void
```

## Map

- board: Building \*[40]

+ change(int, Player &): void  
+ printname(int): string  
+ getowner(int): Player \*  
+ getname(int): string  
+ getCost(int): int  
+ getmort(int): bool  
+ setOwner(int, Player&): void  
+ improve(int): void  
+ ntimprove(int): void  
+ lsmonopoly(int): bool  
+ setmortgage(int): void  
+ setunmortgage(int): void  
+ getPay(int): int  
+ getlevel(int): int  
+ getLoc(int): int  
+ getblock(int): string  
+ getbuilding(int): Building \*  
+ auction(int, int, char, int, int, map<int  
Player\*>, Building\*, map<int,  
int>):void  
+ setload(int, int): void  
+ getbanben(bool): void  
+ lsownable(int): bool

## Abstract Building

- name:string  
- loc: int  
- banben: bool

+ virtual getowner(): Player \*  
+ virtual setowner(Player &) : void  
+ virtual getCost(): int  
+ virtual addCost(int): void  
+ virtual subCost(int): void  
+ virtual getPay(): int  
+ virtual setPay(int): void  
+ virtual getmort(): bool  
+ virtual improve(): void  
+ virtual ntimprove(): void  
+ virtual lsmonopoly(): bool  
+ virtual setmonopoly(bool): void  
+ virtual setunmonopoly(): void  
+ virtual getlevel(): int  
+ virtual addmem(Building): void  
+ virtual getloc(): int  
+ virtual getblock(): string  
+ virtual getblockcap(): string  
+ virtual buy(Player &): void  
+ virtual auction(int, int, char, int, int, map<int Player\*>, Building\*,  
map<int, int>):void  
+ virtual change(Player&): void  
+ virtual setload(int): void  
+ virtual getbanban(): bool  
+ virtual setbanban(): void  
+ virtual setblock(string): void  
+ virtual setname(string): void