

```
"""
```

To make the core battle logic more concise, we can use lambda functions.

```
"""
```

```
class Character:
```

```
    """
```

A class representing a character in a game.
can be Barbarian, Wizard, Paladin, etc.

```
    """
```

```
    def __init__(self, hp, attack, defend):
```

```
        self.hp = hp
```

```
        self.attack = attack
```

```
        self.defend = defend
```

```
# no class DamageCalculator here anymore
```

```
class BattleManagerWithLambda:
```

```
    # using lambda function we can make the code more concise
```

```
    # and the main logic is steady and will not be modified frequently
```

```
    def deal_damage(attacker, defender, damage_calculator, args):
```

```
        if damage_calculator:
```

```
            defender.hp -= damage_calculator(attacker, defender, args)
```

example of using the code

```
def main():
```

```
    attacker = Character(hp=100, attack=50, defend=20)
```

```
    defender = Character(hp=100, attack=30, defend=10)
```

deal damage using minus method

```
BattleManagerWithLambda.deal_damage(
```

```
    attacker, defender,
```

```
    lambda attacker, defender, args: attacker.attack - defender.defend,
```

```
    []
```

```
)
```

deal damage using times method

```
BattleManagerWithLambda.deal_damage(
```

```
    attacker, defender,
```

```
    lambda attacker, defender, args: round(
```

```
        attacker.attack * (
```

```
            defender.defend * 1.0 / (args[0] + defender.defend)
```

```
        )
```

```
    ),
```

```
    [10]
```

```
)
```

deal damage using true damage method

```
BattleManagerWithLambda.deal_damage(
```

```
    attacker, defender,
```

```
    lambda attacker, defender, args: args[0],
```

```
    [10]
```

```
)
```