

Your team of 25 programmers have been given the job of creating the next game which is a competitor to BGMI.

This game has the following features, it has Enemies, Weapons and Hero (self). To start, design the class hierarchy to implement these features.

```
public Interface IEnemy
{
    public void GetShot(int damage);
    public void Move(char direction);    // N, E, W, S
    public void ShootHero(IHero hero, int damage);
    public void Display();
}

public class Enemy : IEnemy
{
    int _health;
    char _direction;

    public Enemy(char direction)
    {
        _health = 100;
        _direction = direction;
    }

    ..
}

public Interface IHero
{
    public void GetShot(int damage);
    public void Move(char direction);    // N, E, W, S
    public void ShootEnemy(IEnemy enemy, int damage);
    public void Display();
}

public class Hero : IHero
{
    int _health;
    char _direction;

    public Hero(char direction)
    {
        _health = 100;
        _direction = direction;
    }

    ..
}
```

```

public Interface IWeapon
{
    public void Shoot(int bullets);
    public void Reload();
    public void Display();
}

public abstract class Weapon : IWeapon
{
    int _magazineCapacity;
    int _remainingBullets;

    public Weapon(int magazineCapacity, int bulletCount)
    {
        _magazineCapacity = magazineCapacity;
        _remainingBullets = bulletCount;
    }

    public abstract void HideWeapon();
    public abstract void ShowWeapon();

    public virtual void Shoot()
    {
        _remainingBullets -= 1;
    }

    public virtual void Reload()
    {
        _remainingBullets = _magazineCapacity;
    }
    ...
}

public class Pistol : Weapon
{
}

public class Ak47 : Weapon
{
    public override Shoot()
    {
        for(int i = 1; i <= 10; i++)
            base.Shoot()
    }
}

void Test()
{
    IWeapon weapon1 = new Pistol(6, 20);
    weapon1.Shoot();
    weapon1.Shoot();
}

```

```
    weapon1.Reload();
    weapon1.Display();

    IWeapon weapon2 = new Ak47(40, 240);
    weapon2.Shoot();
    weapon2.Display();
    weapon2.Reload();
    weapon2.Display();

    IEnemy enemy = new Enemy();
    IHero hero = new Hero();

    enemy.Display();
    hero.Display();

    enemy.Move('S');
    enemy.ShootHero(hero, 25);
    enemy.GetShot(10);
    enemy.Display();

    hero.Move('S');
    hero.ShootHero(hero, 25);
    hero.GetShot(10);
    hero.Display();
}

// Create another weapon called Bazooka
// Override the methods appropriately.
```