

```
Sagarui (Driver)
ArrayList<Sagar> sagars
ArrayList<Mass> mass
Sagar player
int AINum
bool playerIsDead
bool playerIsSpectating
final bool debug

void setup()
void draw()
void keyPressed()
void mouseClicked()
void updateSagars()
void updateMasses()
void updateLeaderboard()
void ballConsumption()
void massConsumption()
void deadSagarRemoval()
void spawnMass
void leaderboard()
void respawn()
void playerStats()
```

```
Sagar (abstract)
pQueue<Ball> __balls
long _lastSplitTime
int _totalMass
Ball _target
Boolean chasingTarget
bool willSplit
ArrayList<Sagar> sagars
ArrayList<Mass> mass
color _col
String _name

int compareTo(Object)
void move()
void display()
void calcMass()
void update()
void decay()
void merge(HumanBall, HumanBall)
void targetClosest()

* Accessors & Mutators omitted *
```

AI Sagar

Human Sagar

```
Ball (abstract)
float x, y, rad
color _col
int _mass
Sagar _parent

bool consume(Ball)
void consume(Mass)
abs void move()
void display()

* Accessors & Mutators omitted *
```

AI Ball

Human Ball

```
Mass
float x, y
int _mass
bool exists
color _col

void display()
```

Snekui

```
ArrayList<Snek> sneks
ArrayList<Mass> masses
Snek player
int AINum
bool playerIsDead
bool playerIsSpectating
```

```
void setup()
void draw()
void mousePressed()
void mouseReleased()
void updateSneks()
void updateMasses()
void spawnSneks()
void massConsumption()
void deadSneks()
void deadSnekRemoval()
void leaderboard()
void respawn()
void playerStats()
```

Snek (abstract)

```
LinkedList<Segment> _body;
ArrayList<Snek> sneks
ArrayList<Mass> masses
color _col
float speed, heading, x, y
bool degrade, exists, inDanger
String _name
```

```
void display()
String toString()
void update()
abs void move()
void consume(Mass m)
```

HumanSnek

AI Snek

```
void targetClosest()
Mass targetMass()
```

Segment

```
float x, y
color _col
Snek _parent
```

```
void display()
```

Mass

```
float x, y
int _mass
bool exists
color _col
```

```
void display()
```

```

Chrenchui
ArrayList<Chrench> chrenchs
ArrayList<Shape> shapes
HumanChrench player
int AINum
bool playerIsDead
bool playerIsSpectating

void setup()
void draw()
void keyPressed()
void keyReleased()
void mousePressed()
void mouseReleased()
Shape randShape()
void leaderboard()
void respawn()
void playerStats()
void shapeRemoval()
void chrenchRemoval()

```

```

Bullet
Chrench _parent
ArrayList<Chrench> chrenchs
ArrayList<Shape> shapes
float heading
float xPos, yPos
int _speed, _damage
bool exists

void move()
void display()
void update()
void hittingShapes()

```

```

Chrench
ArrayList<Chrench> chrenchs
ArrayList<Shape> shapes
PShape tank, body, gun
float xPos, yPos, heading
float speed
bool shooting
int _maxLevel, _score,
    _speedLevel, _health,
    _maxHealth, _healthLevel,
    _bulletSpeed, _BulletSLevel,
    _bulletDamage, _BulletDLevel,
    _bulletReload, _bulletRLevel,
    _points, _pointsUsed,
    _healthRegen, _healthRLevel,
    _bodyDamage, _bodyDLevel
color _col
String _name
double lastShot, lastHit
Deque<Bullet> shots

int compareTo(Object)
void move()
void look()
void levelUp()
void update()
void display()
void shoot()
void doBodyDamage()
void updateBullets()
void updatePoints()
void regenHealth()

```

```

HumanChrench

```

```

AIChrench
void targetClosest()
Shape targetShape()

```

```

Shape
PShape s
ArrayList<PVector> vertices
color c
int _score, _health

void display()

```

```

Square

```

```

Pentagon

```

```

Triangle

```