

# Player Character Core Design

An overview of how the player character works, it's items and weapons. This is to be used as a guide and reference to people building content, ie. if creating a control scheme look and see how the player moves and interacts in the game. If creating UI for the PC look and see what type of stats the PC has. If creating a new weapon look and see the stats that the weapon needs and how it works. Once documents with solid numbers are made they will be link to from this document.

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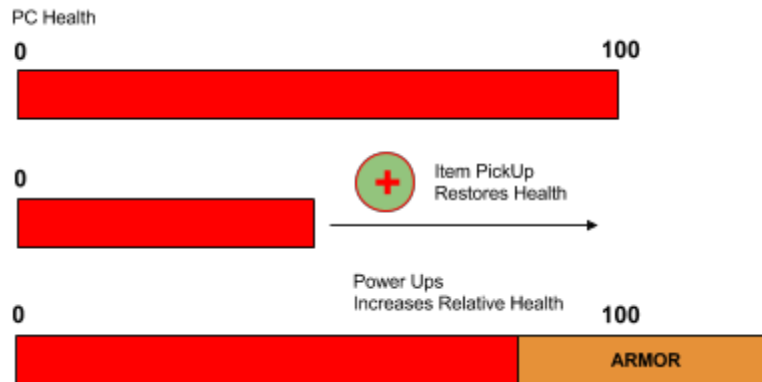
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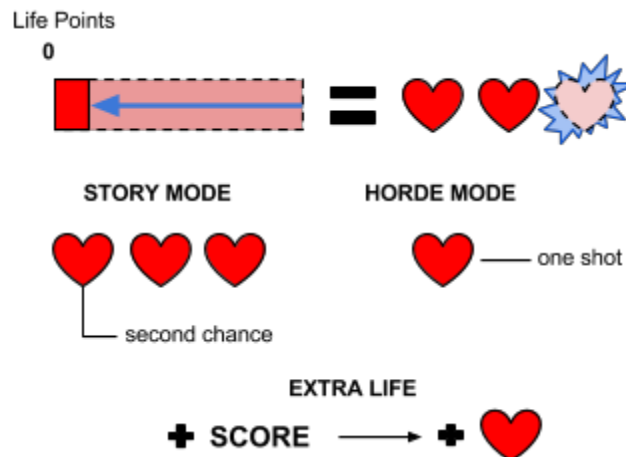
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## Stats

- Health** - Health for the PC. Get reduced when attacked by enemies. This can be restored by picking up a health pack (PickUp). Once health is reduced to zero the player dies or loses a life point. Picking up a defense power up armor points will be applied by adding to the health value creating a relative health, in this way health can be preserved and increased over the max value through this proxy.



- Life Points** - The PC's have life points. In story mode the PC's will have several life points. In horde mode the PC's will only have a limit of one life point. Once health reaches zero a life point is removed. When the PC has reduced their life points to zero the game is lost. Life points act as a saving tool for the player as they get to continue and store up extra points. Extra life points can be rewarded by achieving amounts of score.

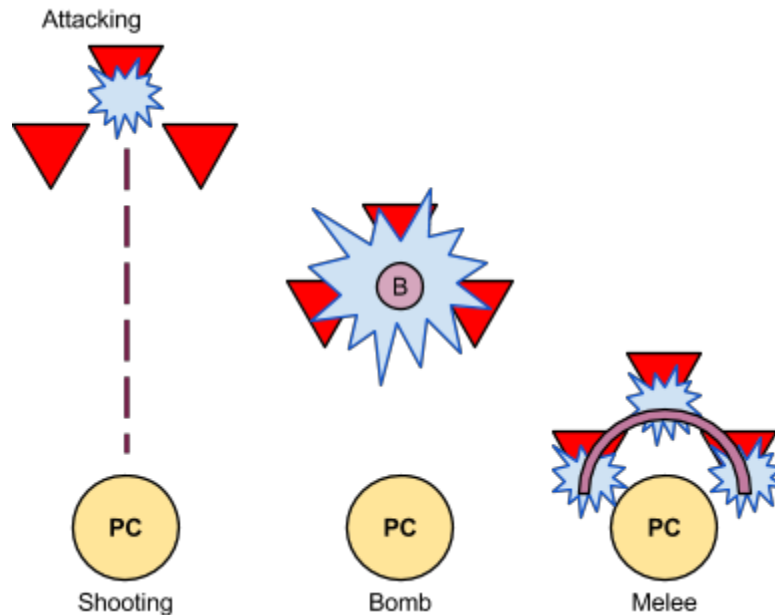


- Speed** - value for PC's movement speed. A higher value means the PC moves farther over time.
- Levels** - PC's level based on accumulated EXP. Higher levels can increase the PC's amount of health, speed and provide additional abilities.

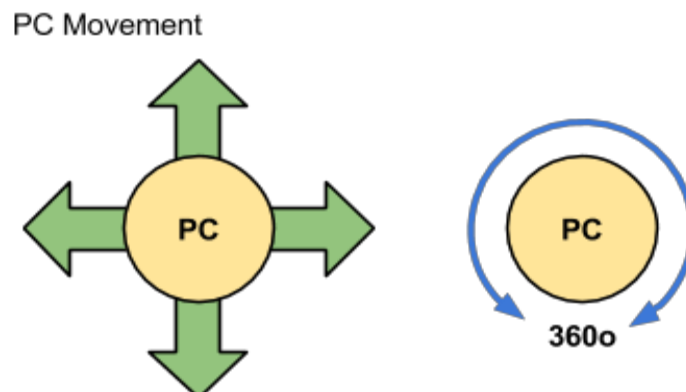


## Mechanics

- **Attacking** - The actions the PC uses to deal damage to objects and enemies.



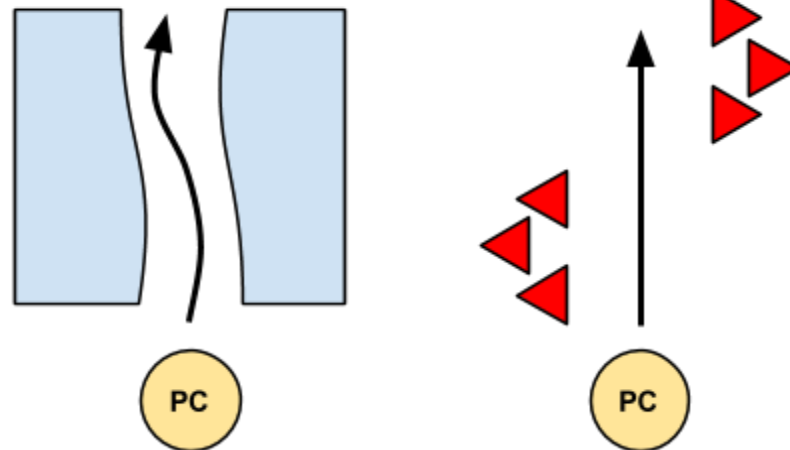
- **Shooting** - This is the main way the PC can deal damage. Generally weapons will shoot a projectile on which when the projectile hit an object it deals damage. Gun and similar weapons (eg. a flamethrower would be considered a gun/shooting weapon) are accurate and have longer range.
- **Bombs** - A secondary attack in which a bomb is thrown and deals splash/area damage. Its range is less than that of a shooting weapon and damage varies. They may also deal special effects in addition to damage or just special effect without damage.
- **Melee** - A secondary attack which is close range but generally wide in effect area hitting multiple enemies. The melee weapon will be swung in front of the player. Used to fend off encroaching enemies and gain better ground. It is lower in damage and an increased risk since enemies are closer. The attacks are also limited, ie. a cool down before another attack can be used. This would be dependant on melee weapon used.
- **Moving** - The PC can move in the x and y axis and can rotate around the z axis. The player is limited to this movement and therefore cannot jump (nor will there be a need to). The movement along the x and y axis allows the PC to traverse the terrain and map. Rotation will be used for directing fire from weapons. Therefore rotation and movement are independent of each other.



- **Walk** - A slow movement in a direction independent of the PC is facing. This can be used for traversing dangerous terrain carefully and accurately. Depending on game play can be useful in

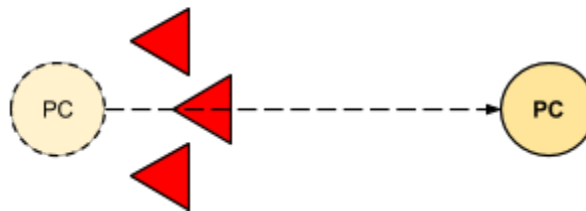
avoiding detection by enemies.

PC Movement Walking



- **Run** - A faster movement that is the default speed in a direction independent the PC is facing. This is the base speed on which enemy speeds will be formed around for types.
- **Spin/Turn** - The PC can spin 360 degrees both clockwise and anticlockwise. This movement is never hindered by terrain and rarely by anything else either.
- **Dodge/Dash** - A movement in the direction the player is moving (not facing). This movement is quick and in a straight line in which the PC will move over enemies without incurring damage. It is to be used to escape damage and to gain better ground.

Dashing



- **Picking Up/Powering Up** - They will be pick ups/power ups on the map and dropped by enemies pick ups. When the PC is near or over a pick up the player has to activate it and then it is used or stored.

## Items

- **Health Pack** - Restores a certain amount of health upon pickup. The recovery of health is instant and will be only used when health is lower than the PC's current max health.
- **Power Up** - A pickup which provides the player with a boost in ability. It may be increased damage for the next three kills or a shield that will protect the PC from damage for a certain time limit. Effects and temporal length they are will vary greatly, even power ups of the same type may vary from one another, however power up are to be useful and positive.

## Weapons

- **Default Weapon** - the game draws much from the arcade style. So as in Space Invaders, Asteroids and Centipede the PC has unlimited ammo for their default weapon. The default weapon is of average stats.
  - Ammo - unlimited as per above.
  - Range - the range of the weapon is to the edge of the screen. Whatever is not on the screen cannot be shot at.
  - Rate of Fire - An automatic weapon with a high rate of fire.
  - Damage - since the high rate of fire of this weapon the individual damage of each hit will be low.
- **Special**
  - **Bomb** - A bomb is a special weapon type that deals splash/area damage. It is thrown away from the player and upon impact with ground or other object (enemies as well) it detonates dealing damage.
    - Radius - the area from the point of impact that the damage is dealt.
    - Range - the distance the bomb can be thrown
    - Damage - damage of bomb. Depending on distance from epicenter of the blast damage may be less.
    - Ammo - Bombs are a more limited weapon. One bomb equals one explosion with a carry limit up to around 3.
  - **Melee** - An attack by the PC with a melee weapon. The melee weapon can hit multiple enemies in one swing.
    - Radius/Range - how far out the weapon reaches.
    - Sweep - how wide the swing of the weapon is as an angle.
    - Damage - damage dealt by weapon upon contact.
  - **Guns** - Special guns follow the default weapon model needing a Range, Rate of Fire, Damage and Ammo capacity.