**Space Game TODOs**

* Name of game – Searching For Stars (or something similar, a pun on Search For a Star)
* Lives / Health
  + Upon hitting an enemy, either:
    - Give each player a ‘lives’ field (int), have it decrease upon a collision, make player immune for a few seconds after collision, make player disappear on 0 lives
    - Give each player a ‘health’ field (double/float), have it decrease as long as it is being touched (i.e. every frame, if collision, decrease health by 0.01), make player disappear on 0 health
  + Display lives/health
* Power-Ups
  + Make them be a plain sphere/cube, like in ‘Roll a Ball’, to start with
  + Make them just spawn in set places at start of game
  + Make them disappear upon collision
  + Make them do things to the player, such as:
    - Make player repel enemies
    - Make player un-attractive
    - Give player bullets (Shooting to be implemented later, so just give player a bullets field and make this decrease when Q is pressed)
    - Give player bomb (Bombs to be implemented later, so just give player a bomb field and make this decrease when E is pressed)
    - Make enemies attract to you less
    - Make you faster? (May make it harder for yourself)
    - Make closest enemies disappear
    - Shield
  + Make them spawn randomly
* Make player movement more controllable
* Score
  + Make score increase every second
  + Score counter on screen
* Control number of enemies
  + Make a max number of enemies
  + Maybe make some despawn (don’t really want this)
  + Stop enemies spawning near player
* Different types of enemies
  + More/Less attracting
  + Bigger/Smaller
  + Shooting ones
* Collectibles
  + Make a collectible appear (initial sprite)
  + Make them appear in set places
  + Make them increase the score
  + Make them spawn randomly
  + Get better sprite
* Shooting
  + Make a bullet fire and move along screen when Q pressed
  + Make them collide with things and do something
* Rocks
  + Static / Slowly moving
  + Nothing can move/shoot through this
  + Decide how they spawn
* Starting menu
* Ensure game is balanced and looks good
  + Not too cluttered with enemies, powerups, collectibles and rocks
  + Not too difficult
  + Enemies don’t attract to you too much
  + Powerups don’t affect you too much/little
* Change background/level design
* Good assets
  + Assets for enemies, players, power-ups
  + Upon collection of powerups, assets to add to ship
* Multiplayer
  + Change UI to load a single player or multiplayer game
  + Another player in game, controlled by arrow keys
  + Allow for players to shoot each other
  + Add power-ups to affect other players
* Difficulties
  + Able to choose a difficulty on UI
  + Less power-ups, more enemies, etc.
* Ship customisation
  + Change colour of ship
  + Multiple ships
* Settings
  + Key bindings
  + Accessibility (Brightness, colour blind help, etc.)
* Leaderboard
  + Will also need a username entered upon completion of game (Old style 3 letter thing maybe?)
* Achievements
* Pause button/menu/screen
* Bosses
  + Twin bosses that flock to each other fairly well
  + Ones that shoot
  + Ones with very high health
  + Group of little ones that flock to each other lots, or maybe absorb all things around them and go for the player
* Game gets harder as time goes on
  + More enemies spawn
  + Less powerups
  + Harder enemies spawn
  + Bosses get harder
* Game ends after all bosses
  + Takes you back to main screen/leaderboard screen
* Effects to make it look cool/space-y

Will need to spend a day on assets (backgrounds, sprites, making sprites collide and rotate and look correct, background music, sounds on collision/button press/powerup, effects to look space-like such as particles emitted from moving objects, things like player flashing when powerup expiring, player flashing when they have shield immunity, powerup flashing before it disappears)

Will need to spend a day on UI (Main menu, pause button in game, leaderboard & results screen, settings on main menu or pause button or both, choice of ship on main screen, customisation of ship like changing colour or something else simple, achievements)

Will need to spend a day finishing powerups (Bomb, bullets, implementing both of these as features, making a max number of powerups on screen at once, so random old one disappears for new one)

Will need to spend a day making the game get harder as you progress (Make spawn frequency change, have different/harder enemies appear, less powerups appear, maybe have a go at some basic bosses as these should just be the same as enemies but a bit more specialised in effect)

Will need to spend a day tweaking game to make sure everything seems polished (Including difficulty, settings for all powerups/enemies, there are no bugs anywhere, make sure player is controllable)

Will need to spend a day tidying up the code (mostly the player class)

Extra time should go towards multiplayer, or other important things on code brief