**Research into MongoDB and Express - (SPIKE)**

Spike Results:

**Express:**

**What is it?**

1. Express is a minimal backend web framework for Node.js
2. It is a server-side framework, unlike popular client-side frameworks like angular and React. It is often used in combination with these frameworks
3. Built on top of the node.js framework
4. Used for handling routes, requests and views

**Why should we use it?**

* 1. Powerful when combined with angular
  2. Widely used = wide documentation
  3. Very light and fast, less code required for tasks
  4. Fast tracks the server-side development

**How are we using it?**

1. Using it to send and receive data from the front-end (could be done without express but it allows it to be done in substantially less code and less time)
2. To manage routes and requests to and from the front end

**Why are we using it over others?**

1. Most popular with consistently positive reviews as compared to competitors
2. Much easier learning curve when compared to contemporaries, this fits our limited time space.
3. Compatible with other middleware
4. Is popular in a lot of real-world companies so it’s is good experience to use and learn it

Spike Results:

**Mongo DB:**

**What is it?**

1. Mongodb is a NoSQL database (not only SQL) used for
2. Unlike relational databases, mongo stores data in documents which are like JSON’s
3. Object orientated design

**Why should we use it?**

* 1. Highly scalable
  2. Fast performance
  3. Widely used and popular with lots of documentation
  4. Easy integration with node.js and express
  5. Free to use

**How are we using it?**

* 1. We are using it to store all the questions and answers for use within the quiz
  2. The backend server connects to and pulls data from the database on request
  3. We are deploying the database on an AWS cloud

**Why are we using it over others?**

* 1. Team has previous experience with MongoDB
  2. As stated above it has good integration with node.js and express
  3. It generally has faster development time when compared to MySQL databases
  4. MongoDB’s documents are similar in structure to normal object-orientated programming languages than SQL query language
  5. Is popular in a lot of real-world companies so it’s is good experience to use it
  6. Extremely flexible with no rigid schema, changes can be made to the tables very easily and far down in development time. Helpful as we have no prior experience with online quiz app development
  7. We are only dealing with one table (questions) so no need for relationships
  8. Popular in most work environments, valuable to learn.