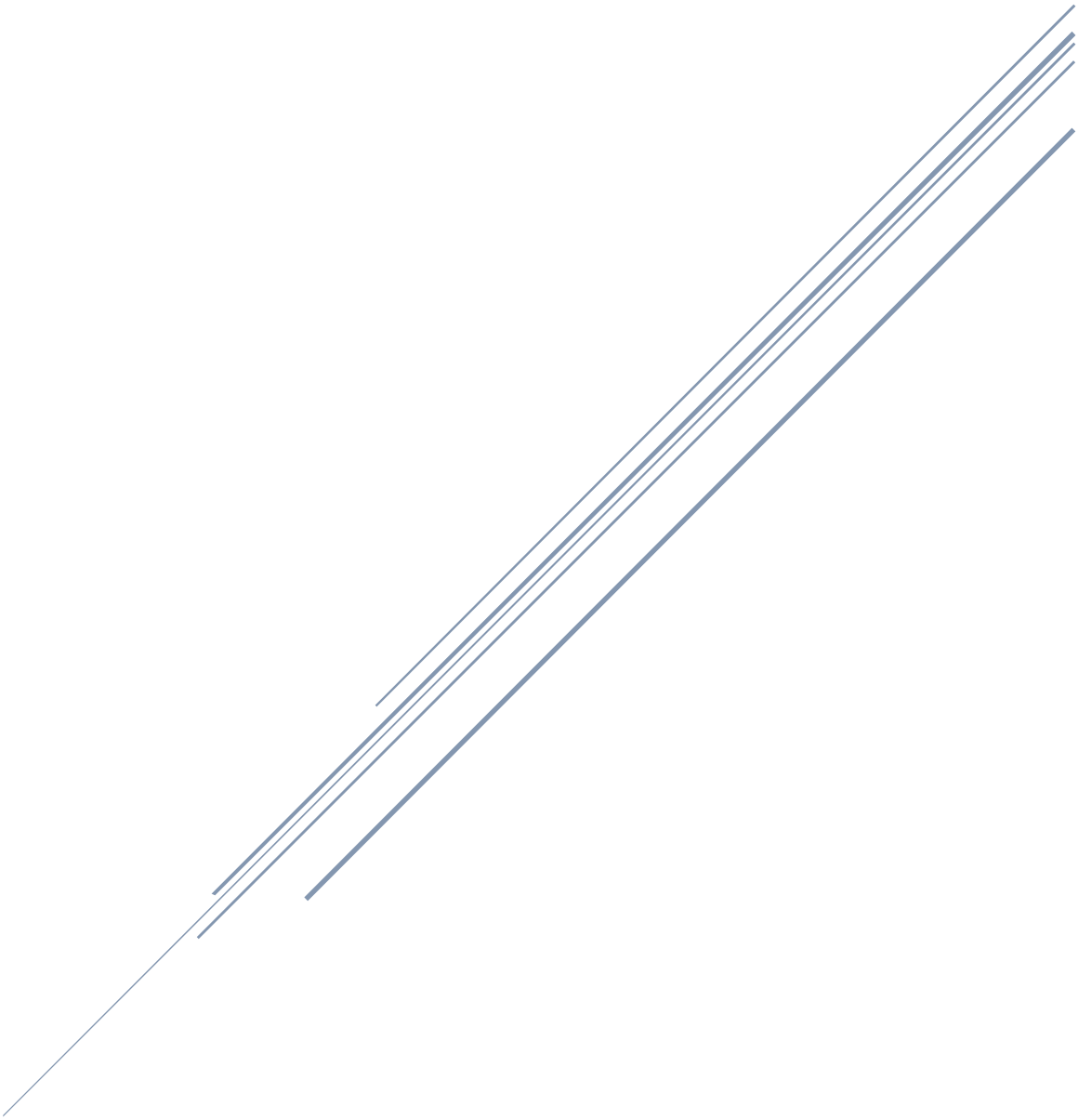
SDLC GROUP WORK TASKS 1 & 2

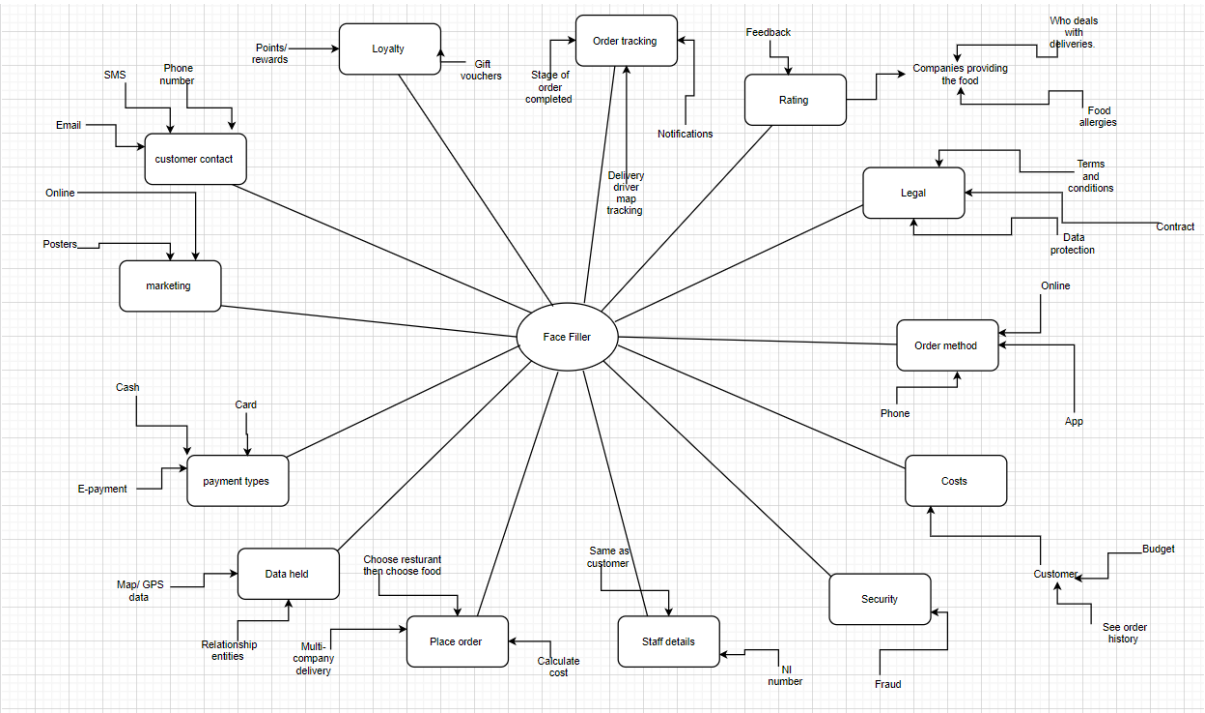
Unit 9 Assignment 2



By Charlotte Peachey, Charlotte Ward, Mathu, Ramzcy, Panashe Chimhina, Daina Tarleton and Finley McGonigle.

Group work

We have been tasked with designing and modelling a new food aggregator, this means researching from scratch with different methods including an interview with a software developer at an existing food company, multiple research studies and feasibility studies and reviews existing companies and software's. The main question was "What would a brand-new food delivery service (food aggregator) need to consider interfacing with the systems of a restaurant/ food delivery chains in order to provide a new service?".



Interview

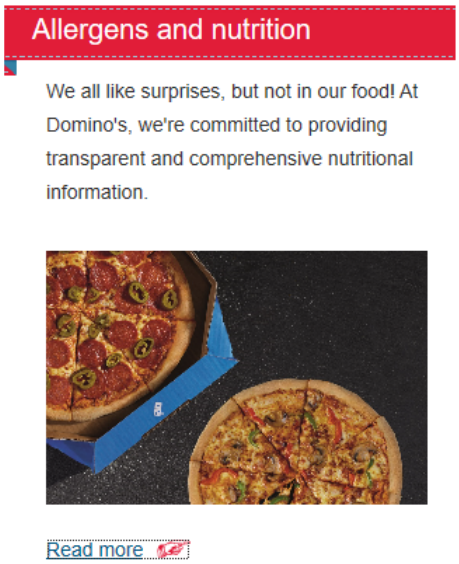
We interviewed an employee from dominos pizza Gunval Store on the 28 Nov 2019. The following are the questions we asked him and his responses as paraphrased by each of the members of our group. To look at some of our original notes from the interview see Appendix A at the end of this document.

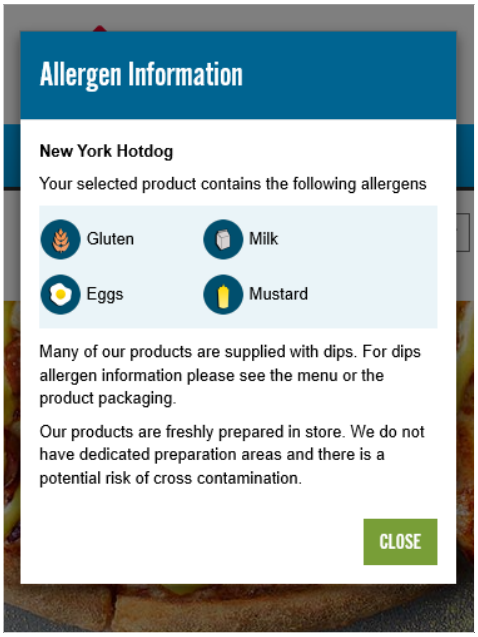
1) Are there options to cancel an order once placed and get refund? - Mathu

There is no way to cancel the order from the app/online, but if you want to cancel your order, then you need to contact with customer service people (over the phone). They deliver your foods to your door before 26 minutes (average time), that's mean they stat the preparation for your food from that second you hit the conform order button, and they take about 6 minutes to make your food. (it's very hard to cancel your order and get refund).

2) Can allergy information be provided in all items? What else? - Mathu

Yes, all allergic information is provided on a different website that call “corporate.dominos.co.uk” https://corporate.dominos.co.uk/ , also they provide a short and easy understandable allergic information on the website/app. You can see them by click the “Allergen Information” also they provide each store’s Food Hygiene Rate. They don’t suggest us any stores who has 2 or less than that rating points.





3. What would be the likely max/min order times? - Ramzcy

To prepare an order, it roughly takes about 26 minutes. An order from the store to a distanced customer property, the stores itself set up as a catchment area that covers certain numbers of the postcodes.

4. What would happen in the case of Fraud? - Ramzcy

A team that works with police and the banks to deal with fraud. There are different types of fraud such as a person's credit card been hacked, or somebody else’s is using the person card. Therefore, the owner of the card is responsible because you're accepting the payment. So, you must call your bank and letting them know that your card has been hacked or misused and they will sort you out with the possibilities.

5. How would you normally deal with payments from a food aggregator? – Charlotte Peachey

The aggregator would handle the transactions from the client and would be given an invoice from Dominos with regards to the money commission from orders (the payment required from the actual cost of the pizza). Dominos would track the order themselves.

6. Would you provide us with postcodes that can be delivered to? – Charlotte Peachey

No you would deal with addresses we would not give you Postal Address Format information.

7. What is the hygiene policy for prep/delivery all stores inspected by food standards agency?

Checked every three months, different per store. Need special code for aggregator, would give

you an invoice for using systems and Order id which is forwarded to customer, address and order itself

8. What data do you need from us? Why? Data protection?

address, order, contact details, code

9. **What data would you provide to us?**

“Depends on what information you need”.

10. **What is the scope for promotional deals? Limited to the usual ones? Any room for negotiation? “**No there is not much room for negotiation, that’s why we have national offers. Back end systems allow franchises to create their own deals based on things like different areas. For example, some areas like chicken wings more then others so we would put them on offer.”

11: How frequently do prices change? How would you let us know? - Panashe

Dominos’ back-end systems allows the franchisees to change the prices of their meals. It does not monitor or keep track of the prices unless the companies make mistakes in the pricing.

12: How could we pass feedback to you? - Panashe

They are two types of feedback:

1: ***Aggregator Feedback***: Customers can provide feedback from the aggregator application.

2: ***Customer feedback for Dominos****:* Dominos has a platform called feed us back which allows customers to provide feedback. They provide their reviews and ratings on that website. Customers can also provide feedback social media platforms such as twitter. Marketing monitors social media and offers quick instant feedback to the customer.

13. What could we do to maximise profit? – Charlotte Ward

This depends on the percentage of orders. Having a fewer number of orders means you won’t be able to make much profit compared with having a greater number of orders.

14. Are there conditions in place if a large order is made to prevent risk? – Charlotte Ward

Larger orders are capped at £150, and you can only place 5 orders at a time. After this, you must call the store to collect, instead of having the food delivered. There’s an internal list that stores the risk of people not paying after delivering

with cash, which can be used to identify when the customer should be forced to pay by card.

Research

Stakeholders - Charlotte Peachey and Charlotte Ward

Stakeholders are people who decide upon system or project requirements, and control how those requirements are met. Stakeholders are usually clients who requested the system, employees, end users, company managers, shareholders, and anyone else involved in the system. Individual stakeholders will be interviewed, and a criterion would be made for the system. The success of the system would be based on this criterion which would include requirements of the system from the stakeholders. For example, customers of a food aggregator like Face Fillers would require the system to display a choice of menus from different food establishments that the customer can order from and show their order at the end, allowing them to pay through the aggregator.

Internal stakeholders

One of the examples of internal stakeholders would be shareholders of the company. As this is a small business, the shareholders would likely be company creators and developers, and therefore would be internal. The shareholders of the company would be concerned about how much the system would cost and how successful it would be in practice. For example, the shareholders of Face Fillers would want to know about the applicability to the food aggregator market. This would involve a detailed look at current aggregators to ensure that Face Fillers has a place on the market and will be competitive with other current popular aggregators such as Deliveroo and Just Eat. The shareholders would also have a say in the development of the system and how much that development will cost, as well as actions that can be taken to maximise profits later in the system’s life.

Possible requirements of system:

Keep records of sales and costs in order to calculate profits and measure success.

A feature set or business model that sets Face Fillers apart from the competition.

Another example of internal shareholders could be management, including the CEO, CTO, and the head of IT. These stakeholders would be concerned with compliance with laws and legal regulations that the system needs to abide by, such as data protection laws. They would also require the system to be easy to maintain and allow for expandability should the Face Fillers aggregator app become more popular and thus require growth to account for higher demand.

Possible requirements of system:

Compliance with laws e.g. Data Protection Act and GDPR.

Scalability of the system.

Maintenance of the system, the system should be easy to maintain.

Updates to meet compliance, how easy it is to update the system to comply with requirements of different operating systems, e.g. iOS and Android.

A further example of stakeholders could be IT department staff and employees of the company. Employees, for example customer service employees, would require the system to be user friendly and require a feedback section to help improve the usability of the system for the customers.

Possible requirements of system:

Easy to use interface.

Allow for user feedback.

External stakeholders

One of the examples of external stakeholders could be local businesses, which would require the system to include their menu and delivery bounds, as well as a system to handle transactions being placed and order information for preparation.

Possible requirements of the system:

Transactions and a backlog of stored transactions.

Order preparation notification for businesses.

Easy access to menu if local business on the Face Fillers app.

Easy to use interface.

Access to company web page via app.

Another example of an external stakeholder could be users / consumers of the food aggregator app Face fillers. They would require the system to have an easy to use user interface, fast system performance, the ability to track orders, a quick order confirmation, and compliance with data protection and GDPR.

Possible requirements of the system:

easy to use user interface (graphic user interface).

fast system performance.

quick order confirmation.

ability to track orders.

compliance with data protection and GDPR.

A further example of an external stakeholder could be government regulators. Government regulators would require the system to conform with data protection laws and GDPR, as well as other laws, and have a good security system in place to protect the system from possible cybersecurity attack.

Possible requirements of the system:

Compliance with data protection and GDPR.

Compliance with other laws.

Strong secure security systems to protect data and physical hardware, including protection against malicious software attacks and physical damage or vandalism.

Additionally stakeholders could include a sample of wider society who would want the system to comply with environmental welfare with the sue of green energy or renewable energy sources, this would most likely become a bigger issue if the company expanded and grew to become a large business.

Possible requirements of the system:

Green energy solutions such as renewable energy.

Cheap and environmentally friendly hardware in shopfronts and delivery systems.

Electric vehicles for delivery.

How does it work- Ramzcy, Mathu

1. It allows customers to keep accounts with them in order to make frequent ordering convenient.

- Our client must place an order through our website (Online) or App.
- From the free App, we get notifications from the customer when they have placed an order.
- The notification also shows us the time of the collection or delivery which was selected by the customers when they want to get their food.
- After we get that message/notification, we can start our cooking.
- We can go to our apps to see past and pending orders anytime.

2. ----------

- User use our website/mobile app
- Pick their favorite foods
- Add items to cart
- Pay and place the order
- Food preparation & delivery

There are 9 steps to create an app.

1. Sketching your idea for the app
2. Do some marketing research
3. Create mock-up of your app
4. Make your app’s graphic design
5. Build your app landing page
6. Make the app with XCode and swift
7. Launch your app in the appstore/playstore
8. Market your app to reach the right people
9. Improve your app with user feedback

What kind of data a user need to use our app

- Name
- E-mail
- Contact number
- House address (for delivery)

Similar companies

Onfleet is a cloud-based last-mile fleet management solution that offers route optimization, auto-dispatching, delivery analytics and customer communications. iOS and Android apps provide real-time driver tracking, proof of delivery, chat and more. Onfleet supports deliveries in multiple countries around the world, in industries ranging from grocery and prepared meals to parcel, furniture, courier, pharmacy and others.

Epos Now is a retail management system for small to mid-sized businesses. In addition to its Point of Sale module, the solution also offers integrated Inventory Management, Customer Management, and Retail Accounting, including general ledger, purchase orders, and payroll processing. Epos Now is cloud-based, and compatible on Windows, Mac, Android, and iPad. Hardware can be purchased directly through Epos Now, or through a third party vendor of choice.

CAKE is a cloud-based point of sale (POS) solution for restaurants. Primary features include payment acceptance, guest and waitlist manager, online ordering, gift cards and tableside ordering. It allows users to track real-time sales at different locations, wages, hours and overtime. The reporting module allows owners and managers to drill down into sales reports to find sales by week, day or hour. Payroll reporting helps users calculate wages and overtime and sales can even be compared to labour costs each hour.

Lightspeed Restaurant is a cloud-based point of sale (POS) solution for restaurants suitable for full-or quick-service restaurants, bars, nightclubs, hotel restaurants, cafes and more. Key features include floor management, customer tracking, inventory tracking, gift card support, offline mode and an iOS mobile app.

OrderSnapp Point of Sale combines powerful cloud-based software with beautiful hardware designed for the restaurant and retail industry. Included with a POS online ordering along with a customized website landing page that receives and manages all orders in one system.

ShopKeep is an iPad-based POS for retail businesses, restaurants, bars, franchises and quick-serve businesses. The multi-feature solution offers tools to manage registrations, booking, marketing, inventory, staff, and payments. The touch screen interface allows users to add and remove

orders from the wish list. Users can also scan barcodes for adding items to the shopping cart.

https://www.softwareadvice.com/uk/retail/shopkeep-pos-profile/

Companies Research Panashe Chimhina

Deliveroo

Deliveroo is an online food delivery company that allows customers choose meals from different restaurants and order on their website or using the Deliveroo app. It partners with the best restaurants from local to country wide renowned restaurants. Their customers have a variety of choices and can receive their orders within an average of 32 minutes. * Customers can see the restaurants delivering in their area when they enter their post code. When customers place an order

The restaurants receive the clients' orders, prepare food and carefully package the food. Deliveroo makes use of riders who pick up the order from the restaurants and deliver it to the customers. It allows the customers to order up to 24 hours in advance with scheduled delivery. The company only takes card payments.

GrubHub

Is an online and mobile meal ordering and delivery marketplace that connects customers to their local restaurants. It allows customers to order from more than 140 000 takeout restaurants in over 2 700 cities in America and Britain. Customers can also pre order from 2 hours to four days and food is delivered when the clients need it. The GrubHub application has express reorder feature which allows users to find previously ordered meals and select their favourites form the order history. It accepts Apple Pay, PayPal, eGigft and cash payments. Customers can also stay up to speed by tracking their order and receive notifications about the order.

Just-eat

Is an online food order and delivery service that enables customers to search for local take-out restaurants and order different meals. The clients can pay online and choose pick-up or delivery options. The company works with over 29000 restaurants in the UK. It provides a secure way for customers to order food online from local restaurants. It offers a wide range of cuisine types. Its application allows customers to easily order variety of meals from different cuisine types and

tailor their takeaway. Clients can track their order and receive direct notifications from on their phones. It also allows them to share their experience with others by giving ratings and reviews.

DoorDash;

American company that delivers food from hundreds of local restaurants within forty-five minutes. It allows the customers to order on demand or schedule a time that works best for them. Their customers can pay directly using a credit card from the DoorDash app or Apple Pay. The company provides up to the minute updates that help customers to track their orders.

Chefit

Offers in-home services that allows customers to pay the same amount of money they would pay in a restaurant. Its website allows the clients to choose personal chefs, order from a variety of meals from their specialties, schedule the meal and the chefs arrives at the client's home with the ingredients.

Important points:

All these companies follow the basic food model principle of meal delivery, offering access to multiple restaurants through an online portal. This principle can be beneficial to face feeler because it is a simplified model that makes it easy for the end users/customers to order food online from different restaurants and keep an eye on the delivery progress in a single portal. Customers prefer simple systems that are easy to use.

We will also incorporate the use of a meal comparison feature on the Face Feeler application that allows the end users to compare prices and reviews of similar meals in different restaurants. This increases the authenticity of the app and enables customers to make meal choices that are more favourable to financial situation.

Deliveroo makes use of riders that deliver food on bicycles within 30 minutes. This gets rid of any traffic problems which can be unpredictable. Face feeler can use the same concept but only our riders will make use of motorcycles. This lowers the time taken to deliver food to customers.

We can also partner add a "quick variety select" feature that allows companies (that provide lunch and other meals to their staff to order) to order a variety of meals and gets delivered at the same time.

Tools Daina Tarleton

Devices the orders will be made on

- Mobile devices/Smart phones
- Computers/Laptops
- Tablets

During a study carried out by Technology adoption, of 37,000 participants, 73% of them said that their mobile phones where the devices that they used the most (Mobilemarketer.com, 2020).

As almost everybody has a smartphone these days, I believe it would be extremely important for our first focus to be creating an app compatible with the popular smart phones: Samsung, Huawei, Apple, Oppo and Vivo (The National, 2020).

Not all apps are compatible across other platforms, equally, not all websites are compatible across diffe5rent platforms. This is something to take into consideration before and when creating either of the two for the face filler app. It will be important that both of them are made to be compatible on other platforms, or that there are other versions created specifically for them.

Devices delivery drivers may use

- Smart phones
- Tablets

A different app will need to be created for the use of the delivery drivers, it would include orders from customers and, delivery and customer details.

Potential Software and development tools

- **Photoshop** (Used for logo creation, images used within app/site)

  Business bundle available for: All apps £59.00/month, Single app £25.28/month.

- **Adobe animate** (Animation used within app/site)

  Business bundle available for: All apps £59/month, Single App

  £25.28/month

- **Visual studio** (Form creation and coding for app)

  Professional bundle available for: £45 a month.

  Free download available: Community Visual studio.

- Database software such as: **Microsoft Access** available with Office 365

  bundle or single app price £109.99**, MySQL** is open source**.**

- **Microsoft PowerApps** available for £10/month.

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The National. (2020). *World's most popular smartphone brands, Q1 2019: Huawei well clear of Apple*. [online] Available at: https://www.thenational.ae/business/technology/world-s-most-popular-smartphone-brands-q1-2019-huawei-well-clear-of-apple-1.871258 [Accessed 20 Jan. 2020].

Services Daina Tarleton

Web services

Data for mobile apps are handled by web servers, web servers are part of the API. They behave as mediators between a mobile application and a database, retrieving data, arranging it in a pre-determined format and then sending it at the request of the application. Most common services used are SOAP and REST, some iOS applications use .Net.

Potential web services: Axmor Software Company, Solid state group, Buildfire.

Database services

A software that provides a platform enabling its users management, provision, configuration and operation of their database. This is done through the use of a common set of abstractions.

This is something that would be useful to run in the background of Face fillers database, it would provide extra support. Using a database service would mean hiring an individual with the skills to maintain and overlook it, this is something that would need to be checked for feasibility.

Feasibility

Technical feasibility

Charlotte Peachey and Charlotte Ward

Labour

Requires a technical team to be on hand to fix the system if it goes down, including: programmers (to fix possible bugs in the code); software developers(to develop any new features that may need to be added); technicians(to fix any physical hardware that the system relies on); staff using the system(the staff that operate the system); customer support staff(staff to look out for and fix customer complaints);

Key risks: lack of availability of specialised staff; Cost to employ may be too high for the break-even point for the company to be reached.

Logistics

Requires food delivery drivers; Cars over vans, heating/insulation equipment, delivery technology (i.e. a tracker that uses GPS and a button for delivery completion). Businesses could offer their own delivery service using the app as a method for taking orders.

Key risks: Having enough delivery drivers and a reliable delivery rate and speed to be competitive; Purchasing a fleet of vehicles is very expensive along with maintenance and fuel.

Software

Point of sale relies on internet connection, web app, mobile app. Links with business computer systems as it relies on a database of products and services, along with a system to assign drivers to orders and orders to accounts.

Businesses require a system to receive orders like a tablet or computer. Software required that is a client to the company servers that issue orders. Systems to accept/deny orders, open shop, close shop, edit opening times and business features (i.e. name, address, menu, etc).

Key risks: if the system runs on external software such as an operating system or applications that may be needed to run in conjunction with the system, the external software would need updating frequently in order to keep the system secure; the system also relies on keeping up with operating system updates for the devices it needs to run on for example,

iOS and Android, to stay relevant and within the market which could require constant development of the system which can be quite time consuming and costly.

Computer systems

Database of products and services including restaurants and prices, delivery times, locations, delivery ranges, etc. Feature availability for discounts and rewards, frequent purchases. Storage for payment information and user data.

Key risks: the data will need to be accurate and frequently updated; it must be ensured that each customer is within range of delivery; discounts and rewards will need to be negotiated by the staff and partner companies (different food chains or restaurants); data will need to be kept within data protection laws and be in line with GDPR; ensure that data is secure and well protected e.g. with the use of virtual and physical security measures;

Marketing

The success of the system and its uses relies on good marketing. This could include targeted marketing towards businesses (explaining possible benefits to them and their business) and possible partnering companies or general marketing towards the consumers.

Two targets: users, client businesses. Both require different marketing campaigns in order to sell. Users may need advertisement and promotion whereas businesses could be communicated to directly, be offered free delivery-taking devices (order tablet), communication about the likelihood for increased sales (relies on a user base and reliable delivery and ordering history?)

Key risks: could be difficult to negotiate marketing with partner companies e.g. can you use company names in adverts etc; bad marketing can lead to bad business; Other companies may have saturated the market and penetrating said market may be more difficult because of this. Market research is necessary to determine how many restaurants are available for subscription to the service

Physical location of business

Decentralised, online interface for sale and restaurant listing. Office with servers may be required later on in the businesses life, earlier on it may be possible to use cloud hosting for databases and core functionality (AWS or Azure?). Developers required (freelance business or hired?) to make software for core functionality, server technicians required to operate the cloud hosting and later on the office servers.

Key risks: if early on in the business there is not main storage facility for data it could be difficult to keep the data and facility secure; Physical locations are at risk of theft, property damage from natural disasters, fires, etc. Considerations should be taken to reduce risks to the business and a disaster recovery plan should be devised.

Summary

The key struggles outlined are the delivery methods (cost of vehicles and drivers) along with the issues of market proliferation and saturation. The development of the app and service also weighs heavily on the potential difficulties that could arise for example needing to keep up with recent OS versions for the app to run on, as that requires lots of labour and server costs in order to function; this could be especially important when considering the implementation of the application as it would be expensive and time consuming for a small company to try and keep up with such a large workload.

Legal feasibility – Daina Tarleton

From completing the licence finder on the Gov.uk website it is found that there are no licences needed for the running or development of Face Filler. Licence finder link:
https://www.gov.uk/licence-finder
A registration of the business will need to be completed. Before registering the business, it is important to undertake an online name registration check to find if there are other business registered with the same name. If there turned out to be
a business with the same name, registration would not be possible, and a name change would need to be made. When the company name availability checker was completed, the results portrayed no other companies found with the same

name. Company name availability checker link:
https://beta.companieshouse.gov.uk/company-name-availability
Employers liability insurance will be needed. This would cover costs created in the event the business has to be defended from employees/ government/regulatory bodies, this includes potential money needed to be payed
as compensation. Businesses are required by law to hold employer's liability insurance.
Public liability insurance will also be needed. Any cost required for legal action or compensation claims against the business from a third party would be covered by this insurance.
Cyber insurance is another insurance that the business will need, covering loss that is a result of damage to/loss of data from IT networks and systems. It is important for Face Fillers to have this insurance because:

- We hold sensitive customer information (names, contact details and addresses)
- Have heavy reliance on IT systems and websites for the conducting of our Business
- Process payment information

GDPR rules and regulations will need to be followed by the business. Face Fillers will need to undertake a certification.
Food hygiene, although no directly involving Face Filler as it would be the food suppliers associated being assessed on their hygiene. It would be a good idea to have a policy to only allow customers access to branches with a rating above a certain score, to avoid potential problems and complaints. This should be scheduled to be checked through
https://www.scoresonthedoors.org.uk/
and then
updated on Face Filler.
Contracts will need to be made between Face Filler and the food suppliers.
A Customer agreement will also need to be written up.
A Privacy policies will need to be written and made accessible to customers.

Economical- Finley McGonigle

We have no cost or budget in this project meaning we don't have to worry about keeping within limits however we need to be realistic, for example we need to make sure we don't think about purchasing a whole room full of servers for a ridiculous amount of money we need to think about starting from the beginning. For example, Uber eats, a new food aggregator is estimated to bring in about $1 billion this year. They take a 30% cut of the food ordered and a delivery fee, then pays the driver. This is a very good business model to employ and it could be a possibility that we use it, however we may take a lower cut as Uber is a household name and our company isn't so may take longer to gain that sort of recognition. It's also highly likely Uber eats has a higher budget to start with, so they had more chance of success.

One option we have is investing in a VPS, this would allow us to run a couple of thousand orders per hour and would be a very good starting point. They are beneficial for several reasons as we could have a fast, reliable cloud-based VPS which could be hosted in a range of data centres around the globe allowing for possible international expansion should we become capable enough. They also offer Windows and Linux operating systems which would allow us to cater to a larger group of people as they are both well know OS's. It also offers SSL

encryption which means we have the best possible protection for our customers data. An external firewall is also included and protects you from attacks, individual rules can be set by admins which can be changed and filter traffic. These would cost about £20-30 a month which is relatively cheap.

We could use a time revenue graph to predict the amount of income we are going to get and when we are going to break even. They way this works is that we predict how much things are going to cost like hosting a server and paying our employee's like driver and other expenses. These might increase or decrease depending how popular our company is and how fast or quickly we have grown. For example, we might need to invest in extra servers if our service is more popular than anticipated. Now we have an idea how much expenses and we start generating an income we use this to predict what part in time we are going to break even and start making a profit. We use this to estimate out annual income. We can use this to look at things like Payback period which is how long it's going to take us to recover from our initial investments and one of the most important things to consider when considering economic aspect of a feasibility study.

TIME FEAISLITY: *Panashe Chimhina*

Can the organisation complete the research, analysis and Design of the face feeler app?

The significance of this study is to assess the degree to which the time frame and the date of completing the major activities of the project meet the 17th of January deadline. It looks at the extent to which the project can be achieved before the deadline. The study also includes some extension solutions in case the project cannot be completed within the agreed time. It helps to determine the taken to complete the whole project considering the time frames of the major activities.

The major activities involved in this project are:
1: Carrying out a requirements research for the Face feeler Food Aggregator Application System
2: Producing an analysis document for the App.
3: Designing the App. These activities are to be completed before the 17th of January 2019.

The available human resources are a team of seven software developers with varying relevant abilities. These tasks are to be delegated to this team and completed before the stated deadline. The organization cannot increase the number of the human resources in this project. The resources required to undertake the major activities of this project are free and easily accessible. Each task can be given to an individual who specialises in the corresponding field. This increases the probability of completing the project in the estimated timeline.

The team has approximately two months to complete the project. At the beginning of the project is a requirements research. The team is looking at undertaking a research that is aimed at identifying the requirements of an ideal food aggregator. This involves identifying other food aggregator apps, analysing how other food aggregators work, tools required and the roles of stakeholders. This is achievable in a period of five days. However, in order to ensure that the team undertakes a careful and incisive research, this period can be extended by an extra day. This extension also allows the team to complete this part of the project regardless of any challenges they might encounter. The anticipated challenges may include internet connection problems, a delayed interview with the Dominos software developer or any other work-related issue. However, these are trivial challenges than can be catered for by the one-day extension.

The requirements research is followed by the analysis stage of the Face Feeler food aggregator's development. This stage involves the use of relevant tools to analyse the

lifecycle phase of the App. This includes identifying the services required, attributes, object relationships and classes. The team is required to model the database elements and describe the requirements. This is a hefty activity that requires a degree of precision and exactness. This is because it contributes to the formation of the framework or blueprint of the Face Feeler App. It therefore requires more time than some of the enlisted activities. A period of fourteen days (plus or minus one day) is required to efficiently carry out this task. There are no costs associated with this task and only the human resources are required. Assistance from other software developers who have carried out similar projects might be required.

The development of this application follows an agile software model. This implies that the design stage of the project is limited to the basic functions of the Face Feeler app. Further developments of the app will occur in iterations after the basic functionality has been designed during this phase. This stage should be completed within a period of ten days considering that some aspects of the foundation have been laid down in the previous stages. Assistance in the form of advice or feedback from other software developers may also be required in order to achieve this within the period.

Social Feasibility – Mathu and Ramzcy

Social Feasibility

Social feasibility can determine even if a project is common for anyone or not. means that

Internal

Performance of the employees has improved by the Technical support, also it has developed their comfort, reliable, directing weaknesses, improved fertility plus standard qualities.

Worried of losing the data or a company future growth, the technical support is there for to help you protect the data.

- Training
- Knowledge of the product
- Time management skill

HR department

In an organisation the human resources (HR) department handles, workers' payroll, recruitment, policies of the employment and benefits. HR staff usually work as managers and they can also explain the fundamental of a company data, therefore, payments for sickness and motherhood leave.

- Employing a necessary person
- Tracking and providing trainings to everyone

In a business Receptionist/Customer service are the main part. It provides customers with a feeling of respected and valued by excellent service, that proves extra resource and makes the business to stand out from the competition.

They must need a training to deal with customers and the arrangements

- Answering calls
- Arranging appointments
- Receiving posts and hand them over to the correct departments

To create a successful team to develop and carry out the workload together by having an excellent team management, that allows staff to progress in any projects and work on daily tasks.

- Scheduling for staff members
- Time management skill
- Leadership
- Technical Knowledge
- Maturity
- Self-confidence
- Positive Attitude

In business sales and marketing, they play the most important part. The team sales locate and certify the point by the help of marketing, also, on the other hand, it keeps in touch with consumers and dealers during the sale cycle.

- Tracking orders and purchases
- Communication skills
- Math skills
- Product knowledge
- Creativity
- Accounting
- Target market analysis
- Flexible

Running a business is impossible without consumers. The reason why that is because is an important part of any business which has played by the customers. They have all the ability to see an organisation succeed or failed.

- Use the company’s service and protect
- Giving a support to run the business

Stakeholders are also very important to an organisation, that is because of their expertise, expose the risk and decreasing. They provide projects success by increasing and accepting project agreement.

- Spend some percentage of money in the business and get some profit from it

The app is made for devices such as:

- Android
- IOS
- Windows

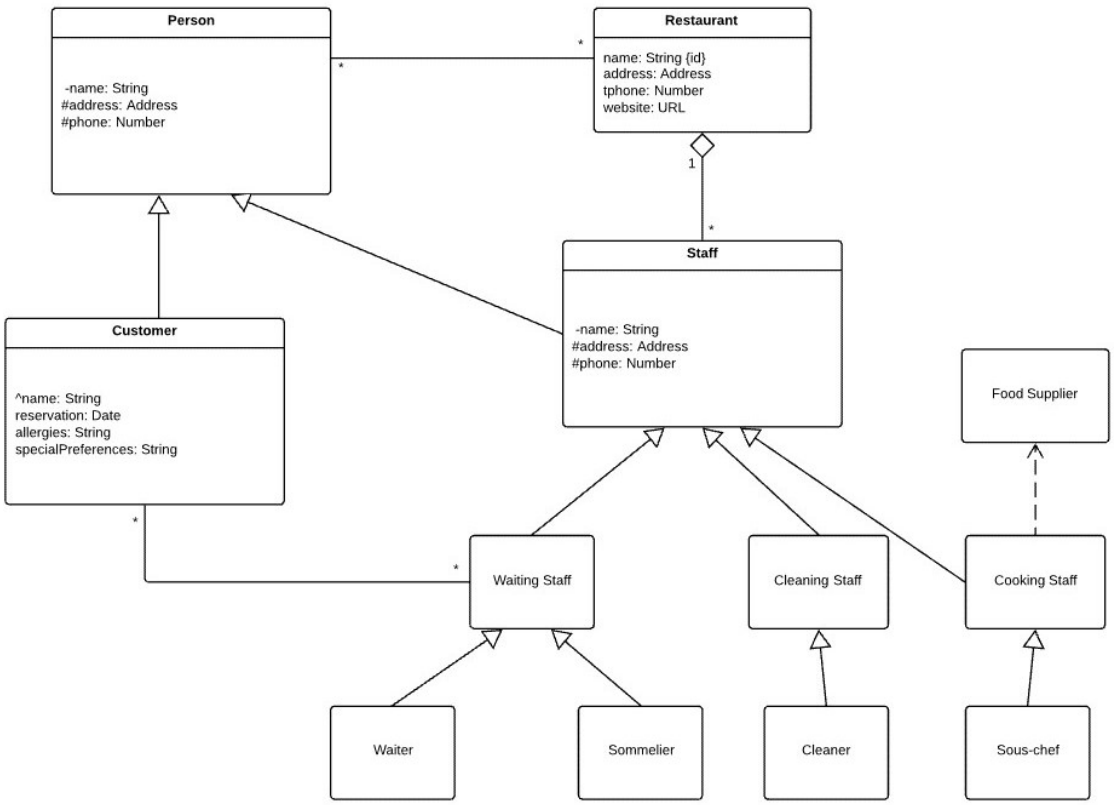
Attributes of the Face Filler: Panashe Chimhina

Face Filler has different application versions that have different attributes. Each stakeholder should have a different application of Face Feeler.

This analysis applies to the following major stakeholders' app versions:

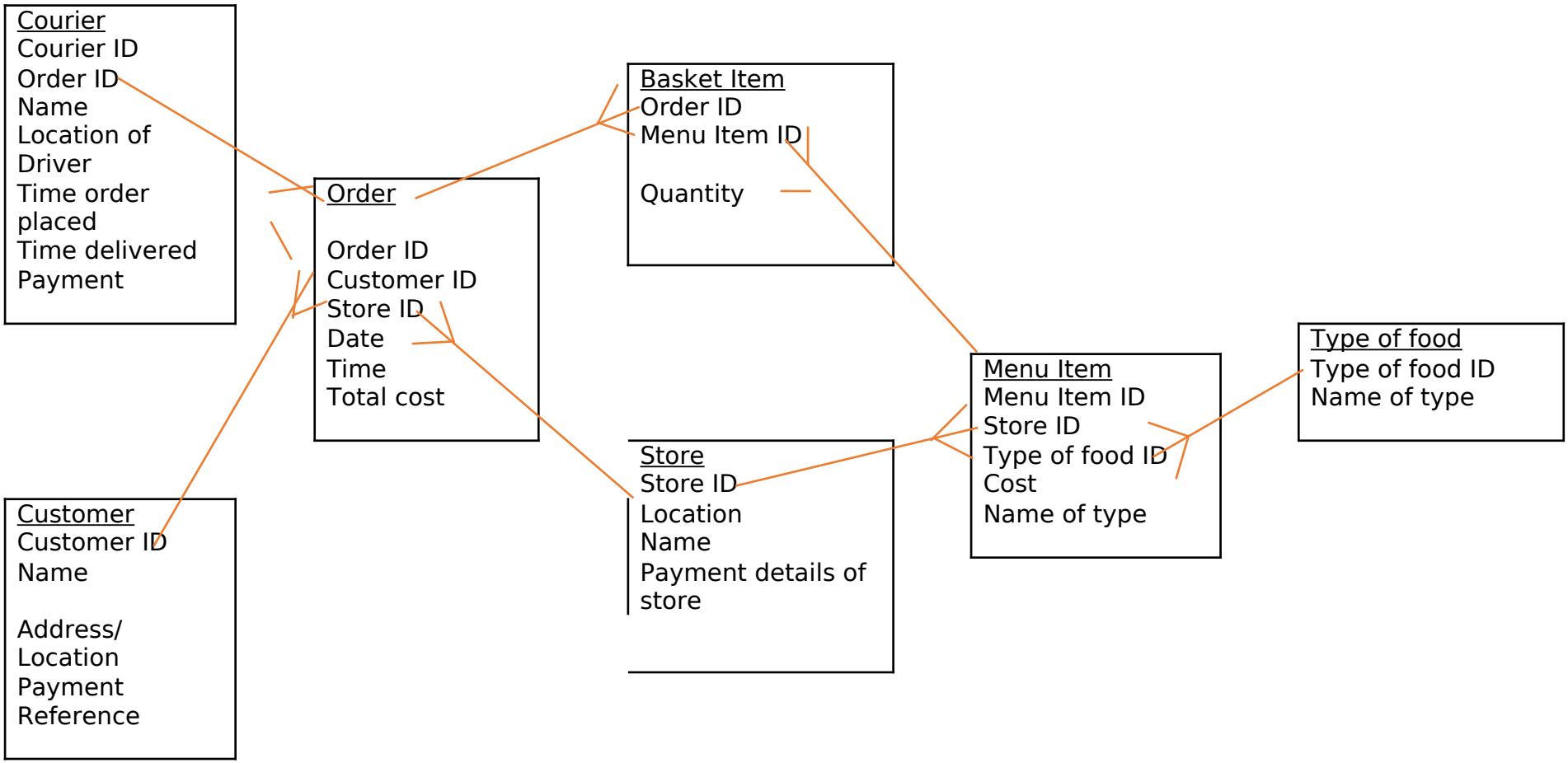
All three apps have the same Face Filler branding and are structured in such a way that satisfies each stakeholder's role.

The following class diagram shows the different attributes that make up the classes and their relationships.



Face Fillers, Food aggregator design

Object relationships, UML diagram (diagram by Charlotte Peachey, objects by Charlotte Ward)



Requirements of the system by Charlotte Peachey

Since Face Fillers is a start up food aggregator company, they are going to need a LAN (local area network) setup with a relatively fast connection to the internet in order to send and receive data, including orders. It is also advisable that they have a DMZ (demilitarised zone) for security purposes. Their servers and computer systems will only need to meet basic hardware requirements, including CPU(central processing unit), Hard drive, RAM (random access memory) etc. Servers storing graphical information could require a more powerful processor or graphics card.

Face Fillers will need software prerequisites such as an OS and the latest versions of .net. Face Fillers may also need C# installed on computers for developers if they wish to further develop the program further in future.

Assuming that each sever has 1 gigabit of space and 940 megabits after overheads.

940 megabits divided by 8 is 117.5 megabytes.

Assuming the web page takes up 1 mega byte of space (this was taken form dominos pizza web page which is 1 megabyte of space).

117.5 divided by 1 is still 117.5 so the server can send 117.5 pages.

Assuming the time a user spends on a webpage is 10 seconds, 117.5 multiplied by 10 gives you 1175 data requests.

Assuming the server can handle this amount of requests, subtracting 20% off for processing 1175 multiplied by 0.8 equals 940 data requests. This means that the server can handle 940 data requests at a time.

If Face Fillers wants to expand they will need to use load balancing and ensure data requests for processing are spread across multiple computers using a content delivery network (CDN), and as many servers as necessary in different regions, they could host in France to reduce server hosting costs. Face Fillers will need to invest in more servers or higher capacity servers if they want to expand. If face fillers wanted to expand they could also store images separately on another sever or in the CDN. Face Fillers could also use network utilisation to ensure they are getting the most out of their network and only use the hardware they need for the size of their current business and expand when necessary. When focusing on expansion Face Fillers may need to consider investing in servers to store backups of their system and data in order to have server redundancy and reduce system downtime.

Appendix A

The following notes from the interview are by Charlotte Peachey. Colour coded black are questions and red are responses.

- Are there options to cancel an order once placed. Refunds? 26 mins, cancellations not many, goes via customer series. Refunds cancelled handled through aggregator. Hard to cancel as so fast, about 6 mins to make
- Can allergy information be provided an on items ? what else? provided on menu. Corporate.dominos.co.uk under our food and allergens and nutrition. Icons on web version for allergen info.
- What would be the likely max/min order times?26 mins average, property and location, store and business. Catchment area for store that covers certain areas.
- What would happen in the case of Freud ? Can't give post office data, licenced to them. Web scrape for stores but not customers. Team that works to deal with Freud. on you accepting payments ourselves. Freud checks bank, customer services, police due to payments.
- What would you normally deal with payments from a food aggregator? dealt with via aggregator, track order and invoice you at end.
- Would you provide us with postcodes that can be delivered to? No, you would have to get that information from the customer.
- What is the hygiene policy for prep/delivery all stores inspected by food standards agency. Checked every three months, different per store.
- Need special code for aggregator, would give you an invoice for using systems and
- Order id which is forwarded to customer, address and order itself
- What data do you need from us? Why? Data protection? address, order, contact details, code
- What data would you provide to us? Depends on what you need
- What is the scope for promotional deals? Limited to your usual ones? Negotiated? Not much room for negotiation, stick to national offers. Back end system that allows franchises to create their own deals, e.g. for areas that sell better in different places.(individual stores)
- How frequently do prices change? How would you let us know? daily, e.g. to get rid of stock, sell by date etc. how we would let you know, api data dump scheduled data dump. Mobile app to use api. Up for discussion to get access to api. Data dump is better. Not much fluctuation, depends on different stores. Centralised supply chain to monitor **quality**, can buy in bulk and sell in bulk. Economy of scale. Gps to track drives, every store has a fleet of drivers. Keep track of drivers.

Set range on prices and local competition. Don't monitor unless they do something silly. Their business - franchise

- How could we pass feedback to you? On their website, aggregator feedback, for dominos, feedback on website with order id. They take care of customer feedback, we deal with own feedback. Twitter. Good feedback channel. Marketing monitors social media, quick instant feedback.

- What could be built into pricing for us to make profit? depends on percentage of orders.
- Has at risk list of people don't pay after delivered with cash, card required if address is at risk. Aggregator mostly use card. If address has not paid more than once. Cash mostly collection orders. Black list can't pay via cash only via card. Card apple google pay, etc
- Can set time limits on deals
- Website only lets your order a max of about £150, 5 orders at a time. Have to call up store and collect.
- Advice? Just do stuff, but document. ' the journey of a thousand miles begins with a single step' Chinese saying. The quicker you can do stuff the better the feedback you get. Agile methodology.
- Gun has Been at dominos for 7 years.

Notes from interview – Daina Tarleton

Dominos typically, do not receive many cancellations of orders. The average time from order-placed to delivery is around 25 mins(fast) so there isn't much time really for customers to make cancellations. Different food places will also have an average delivery time = we can provide this information to our customers

Us, the aggregator would deal with the refunds -depending on how exactly the payments where made. How are we going to take our payments? Paypal, Apple Pay, Google pay etc.

Allergy information from dominos Is provided on their menu, it is also available on the corporate site under *Our food*, there are numerous PDFs available with information.

Information that Dominos would need from us would be: Our unique identification code (provided to us by food provider), the order ID and delivery address and details of the actual order i.e what pizzas.

Catchment area postcodes are not able to be provided to us from Dominos. Data protection. "Path data". Could be found out through research online ourselves, going onto websites and manually looking into what postcodes are with what branch, maybe there is a document online available to help.

Store addresses can be provided to us.

Promo deals – Not much wiggle room with regards to manipulating or providing our own/customized deals. Safest option would be to stick to national deals.

Prices could change as often as daily. Maybe have an hourly data dump to keep up with changes?

Feedback- questions we need to ask ourselves: How will we accept feedback? Will we have the feedback fed onto the app/site? Will we accept feedback via social channels? What is it that we want feedback on? Our services? Our site? Social channels are a good way to gain quick feedback, questions can be asked by us about our service and customers can answer easily.

Profit- Our profit would depend on the percentage of sales we were making from the food companies. The more dominos orders made through our service a month the higher a profit we would make

Dominos use GPS as well as some other food companies to track their drivers, allowing customers to see how long their food will take. This is a feature we may be able to provide to our customers. << Question to ask: **Are they allowed to share the food order process and delivery information with us for us to share with customers via our app/site?**