Task
System Proposal

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I. EXECUTIVE SUMMARY

Task is an application that allows users to request drivers around their area to do their daily chores. Since mundane day to day tasks can get in the way of day to day operations, the goal of this application is to allow users the peace of mind of knowing that their chores will get done in a timely and effective manner. Users will be able to choose from a variety of tasks and will be able to track their driver's location as the task is being completed. Using a simple and efficient design, the goal is to allow users to quickly select the task they want. Users will also be able to create an account in order to store their payment information, frequently requested tasks, and view promotions offered by partnered businesses (for example, users will receive free delivery if they request a task from Stop and Shop).

II. STAKEHOLDERS AND INTERESTS

The primary stakeholders are definitely the corporation, the drivers, and then the users. Any legal, financial, or technical decision will affect the aforementioned groups. For example, a legal decision may affect what the company is capable of doing which will trickle down and affect the rest of the business. If there is a financial problem or it does poorly in the stock market then the drivers will be making less money which may result in the freelance drivers to quit because they aren't generating enough revenue to have deliveries be worth it. Then finally, a technical decision will affect the users because they are the ones who have to deal with the interface to complete orders. In a way, it is only feasible that any given decision will affect those three groups. Affecting one will affect the others since all three are deeply intertwined for the success of the corporation.

Secondary stakeholders are the business owners and their employees. The app will have an effect on their businesses. The services directly affect them and a lack of business or excess amounts of business will contribute to their success. They have directly tied to the corporations are beneficiaries of it.

Lastly, the key stakeholders are government officials or policymakers. They can devise, pass, and enforce laws that will affect our corporation. Their decisions will either affect our goals in a positive manner or inhibit our efforts. Potentially, if there were a law to be passed that

prevented drivers from being freelance drivers, our corporation would then be legally responsible for them which could potentially cost Task lots of money in legal fees and insurance.

III. FUNCTIONAL REQUIREMENTS

User:

As a user of Task, you will first be able to sign up as a member. This consists of name, DoB, address for delivery, email, and phone number. Once you have created your account you will be able to access the main menu, where you will be able to select the type of service you want to be provided. Next, you will choose your method of delivery i.e. express or regular. From there, the user will input their credit card information for payment purposes. Once an order has been sent, a driver will accept the task to complete it. The user will be able to see the GPS location of the driver on their task until it is completed. After the order has been completed, the user will be able to tip the driver if they would like. Each user will be able to make appointments for future tasks, as well as contact customer service. They will also receive a confirmation email at the completion of each task, and emails with special promotions.

Driver:

As a driver for Task, you will first create a drivers account. This will include name, address, DoB, license plate, license number, email, and phone number. Once an account is created the driver can begin choosing to accept tasks. To receive payment for each completed task the driver will input their bank information for direct deposit. Finally, drivers will also be able to contact customer service with any questions.

Manager:

As a manager for Task, you will be given access to a personal managerial account. From this account, you will be able to view the daily active users, track driver GPS location, and track security breaches and threats.

IV. NONFUNCTIONAL REQUIREMENTS

Operational:

The app will be accessible online as well as on mobile iOS and Android devices. There will also be a built-in GPS for tracking deliveries. The service will be accessible at all hours (barring partnering store hours). Users will be able to make their own accounts and be able to access said accounts 24/7. These accounts will be username and password protected for security purposes, and users will be able to track previous orders and offers and promotions. The service will also be working in tandem with partnered businesses inventories. And all information will be presented to the user in an easily accessible way.

Performance:

The service should fluently move between screens and be transparent for both the users and drivers so there is no room for confusion. Users should be able to have a way to directly contact the driver performing their assigned task. The service will portray an "estimated time of delivery" for users when their task has yet to be completed. This will be a way to effectively track the driver so the user will know how close they are to completing their order. For a user to create an order it should take no longer than 3-5 minutes. The service should also have the capacity to handle large orders (multiple tasks in an order) and not crash. 99% of intrusions on the service will be detected. The service will update every 15 seconds automatically.

Security:

Information will be limited to view to users, drivers, and managers based on which type of profile they have.

User: Can see profiles of each other which will contain their ratings, phone number, picture, and a written biography.

Driver: Can see profiles of each other which will contain their ratings, phone number, picture, and a written biography.

Managers: Only direct managers can see personnel records of users and drivers. Managers have can see the most information on users and drivers. They can view users - credit card number, PayPal, phone number, home address, full names. Drivers - government-issued identification, phone number, home address, background check (any criminal records), full names.

Billing information will be private from the users, the app will automatically transfer money to the driver after the task is completed. GPS will only be activated when the driver is doing a task for the user. Once the task is completed the driver will no longer have access to a driver's location. Users and drivers will only provide their first name and last initial on their profile to protect their identity. As previously mentioned, each user and driver will create an account with username and password.

Cultural/Political:

The service will be accessible in all of the world's major languages: English, Spanish, Italian, Mandarin, etc.. This will allow Task to be more accessible throughout the world. The service will also support the world's major currencies. There will also be an employee liability disclaimer. Finally, it will make sure employees understand that they are held liable for anything that happens during delivery.

V. REQUIREMENTS, GATHERING TECHNIQUES, AND RESULTS:

To determine if people would use our app, our team created a Google form with questions that our class could answer anonymously and we also interviewed our classmates to get more in-depth answers that could help us improve our app. These are the results we obtained:

1. How much free time for errands do you usually have in a day?
   85% said 0-5 hours and 15% said 5-10 hours
2. How much time do you spend running errands per day?
   75% said 0-2 hours, 20% said 2-4 hours, and 5% said 4-6 hours
3. Are you willing to pay for someone to do errands for you?
   55% said Sometimes, 25% said No, 15% said Almost Never, and 5% said Yes
4. How much would you be willing to spend on that type of service?
   40% said $5-10, 30% said $1-5, 20% said $0, and 10% said $10-20
5. How would you feel about paying different delivery fees for faster delivery times?
   30% said Neutral, 25% said I Have No Problem With It, 20% said I Might Do It, 15% said I Don't Like This Idea At All, and 10% said I Probably Wouldn't Do It

Interview Questions Results:

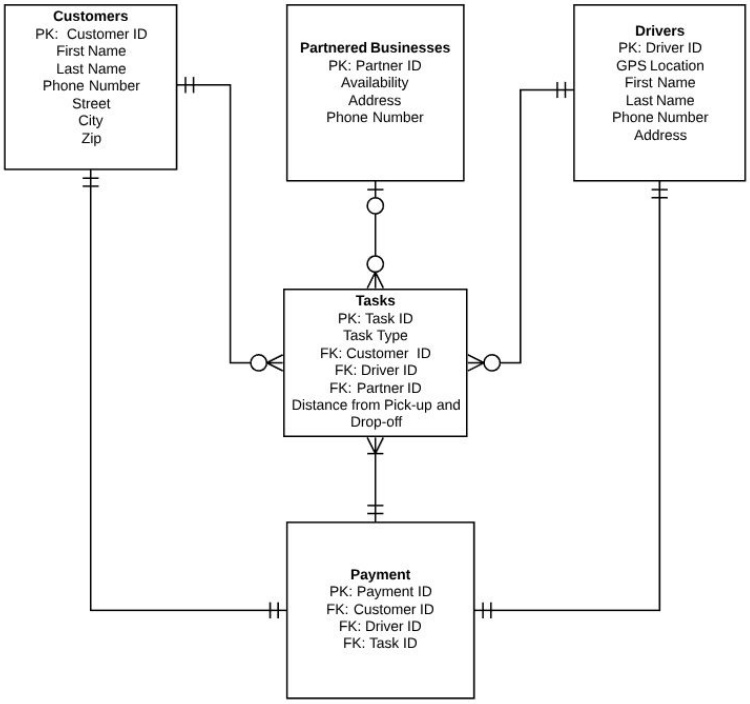
1. What does a typical day look like for you? Include any breaks, typical errands, frustrations, etc.
    a. **Drive, class, work, class, (break) eat, drive home**
    b. **Getting money from the ATM**
    c. **Getting necessities either on campus or off**
2. What are the most frustrating errands to run?
    a. **Supermarket: Groceries are really hard because I need to find someone with a car to drive me there.**
    b. **Post Office**
    c. **Gas**
3. What is frustrating about other delivery apps? In other words, what don't you like about them, and what areas could be improved upon?
    a. **If they mess up my order**
    b. **Reliability**
    c. **Efficient communication with driver and user**
4. Do you see this service being more useful for college-aged students, or full-fledged adults?
    a. **Mostly Adults**
    b. **20/30 years old**

Overall, the people who we surveyed and interviewed were college students between the age of 17-19 years old. We saw that most people do not have time to do their errands and find that grocery shopping seems to be the most problematic errand. However, it shows that most of these college students do not want to pay over $10 for others to their errands. This makes sense since most college students tend to be cheaper. We found that in order to make this app successful, the app should be reliable which includes efficient communication with the driver

and user. Although we surveyed college students, we believe that this app would be more attractive to adults between the ages of 20 and 30.

VI. DATABASE DESIGN DISCUSSION

Below is the entity relationship diagram (ERD) which shows the relationships of how each entity will interact with each other. The database consists of 5 major entities consisting of Customers, Drivers, Partnered Businesses, Tasks, and Payments. Under each entity contains a primary key: Customers contains the CustomerID, Partnered Business contains the PartnerID, Drivers contains the DriverID, Tasks contains TaskID, and the Payment contains the PaymentID.

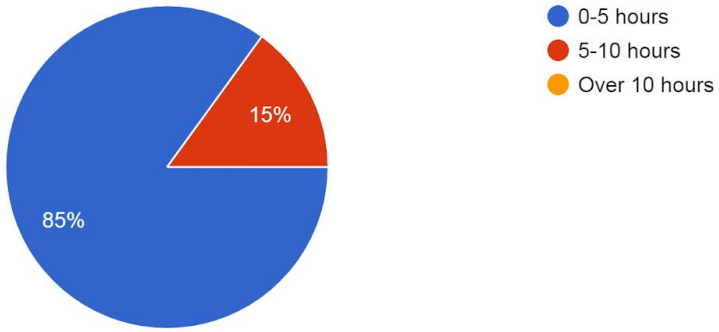


VII. APPENDICES [ALL DELIVERABLES: CONCEPT MAP, SURVEY QUESTIONS, INTERVIEW QUESTIONS, UC DIAGRAS, UC DESCRIPTIONS, E/R DIAGRAMS]

Survey Questions/Answers

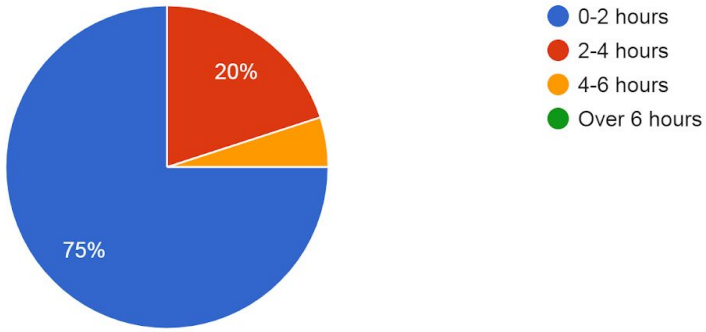
How much free time for errands do you usually have in a day?

20 responses



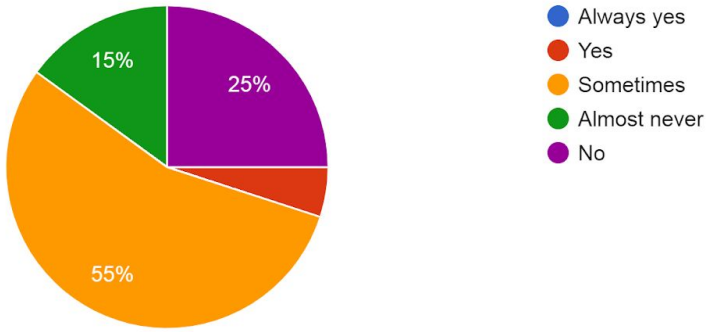
How much time do you spend running errands per day?

20 responses



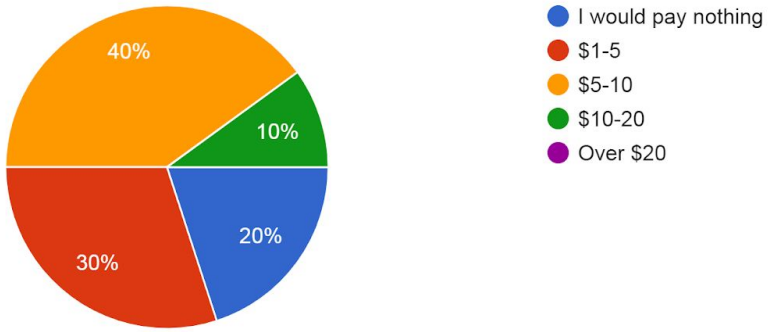
Are you willing to pay for someone to do errands for you?

20 responses



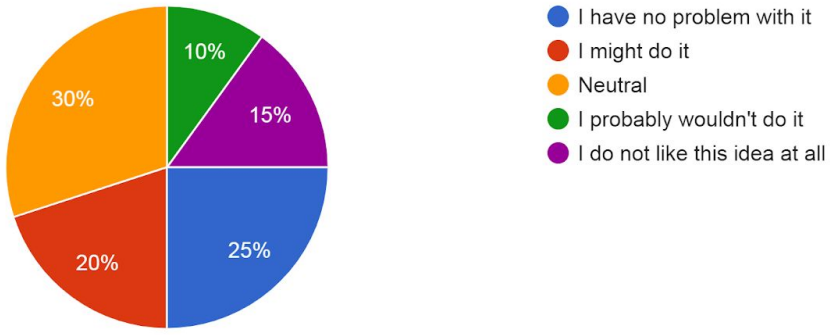
How much would you be willing to spend on that type of service?

20 responses



How would you feel about paying different delivery fees for faster delivery times?

20 responses



Which errand gets in the way of your day to day schedule the most?

20 responses

- Foodshopping
- Doing my laundry
- No errand gets in my way
- Food
- eating?
- Grocery Shopping
- Class
- Getting groceries from Rite Aid
- cleaning room
- grocery shopping
- car washing or buying food
- doing laundry

If this service were to exist, what would you want it to look like? What would you want from it?

20 responses

- Quick and knowing that the stuff would get done correctly
- I would want someone to do my laundry it's too tedious to do myself.
- I don't really care for this service.
- easy to use app. same structure as door dash/uber eats
- not sure maybe look at fiverr kinda sounds similar
- Loyalty programs
- Food Delivery to Dorm
- Quick and on time deliveries. Friendly service.
- your soul
- similar to uber i guess
- A great customer service type of experience with great results
- I want to be able to trust who is ever running my errands to do a good job

Interview Questions

1. Does running errands get in the way of your daily schedule? Why do you feel this way?

For myself, not really but my parents have to crunch in time to make room for errands

- Yes

2. What does a typical day look like for you? Include any breaks, typical errands, frustrations, ect.

Once every week or month. Getting money out of an ATM or the bookstore is basically an errand for me

- Drive, class, work, class, (break) eat, drive home

3. What are the most frustrating errands to run?

Supermarket. Groceries are really hard because I need to find someone with a car to drive me there.

- Grocery, post office, gas

4. How could we make this service efficient and easy to use?

App

5. What is frustrating about other delivery apps? In other words, what don't you like about them, and what areas could be improved upon?

I only get mad if they mess up my order

I'd rather do it myself than have someone mess up

- Reliability
- Efficient communication with driver and user

6. The app would obviously be free, but what would be a reasonable price point for the service? We want to make the service as convenient as possible, and making the service affordable would attribute to that.
    a. How do you feel about having different payment plans and why do you feel that way?

The lowest you can without losing money, maybe send out free delivery codes to help out

Sounds cool as long as bike drivers don't mess up

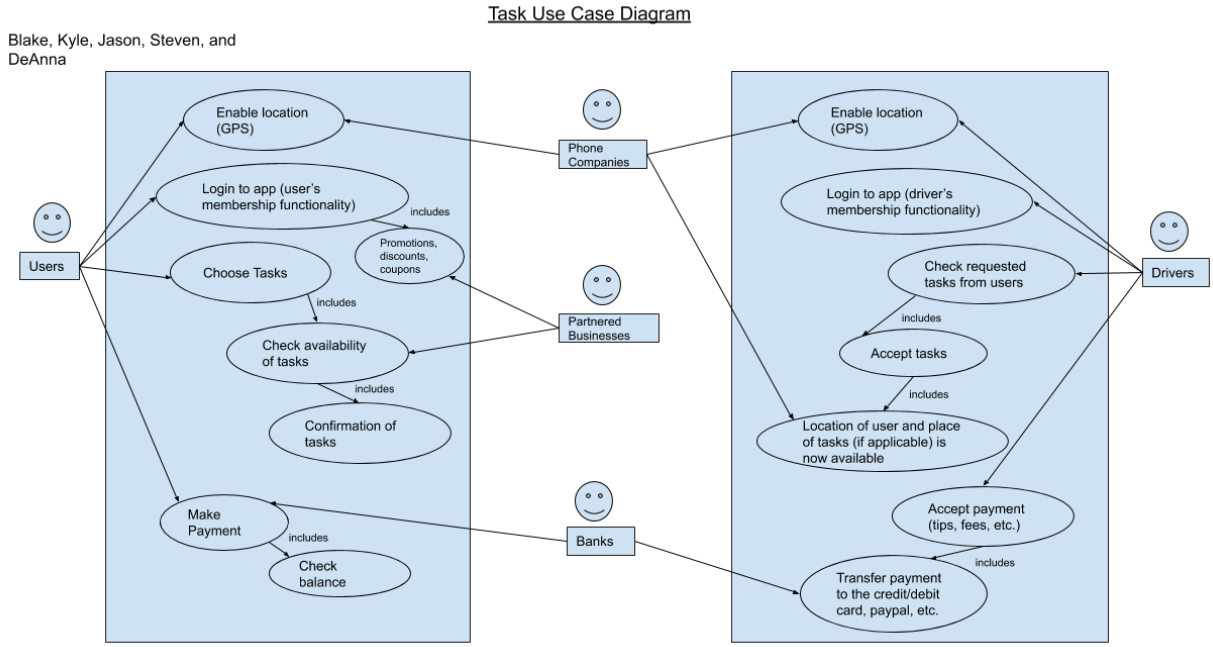
- Price based on distance, service fee, delivery fee, have a rate attached to each general event

7. Do you see this service being more useful for college aged students, or full fledged adults?

Mostly Adults

- 20/30 years old
- Geared towards adults

Use Case Diagram



Use Case Descriptions

Use Case Name: Login to the app/account	ID: 1	Importance Level: High
Primary Actor: Users and Drivers	Use Case Type: Detail, Essential	
Stakeholders and Interests: Users - Login into their account to request their tasks Drivers - Find users' requests and can accept it Partnered Businesses - Can provide promotions, coupons, or discounts for users		
Brief Description: This use case describes how users and drivers will be able to login to their own accounts on their devices so they can request tasks and/or accept requested tasks.		
Trigger: User and driver will enter their username and password to access their account Type: External		
Relationships: Association: User/Driver and Partnered Businesses Include: Promotions, discounts, and/or coupons Extend:		
Normal Flow of Events: 1. User/Driver opens app. 2. App will open to the login page. 3. User/Driver will input username and password. If the user/driver forgets username, the S-1: email will be sent to user/driver is performed. If the user/driver forgets password, the S-2: email to reset password is performed. 4. App will direct the user/driver to the homepage of the app.		

SubFlows:

S-1: email will be sent to user/driver

1. The app will require the user/drive to enter their email so the username that matches the email can be sent to them

S-2: email to reset password

1. The app will require the user/driver to enter email and send them a email for steps on how to reset their password
2. Security questions will be asked when resetting password

Alternate/Exceptional Flows:

S-1, S-2: If the user/driver does not know either username and password, they have the option to create a new account to login to

S-2 1a1 and 2a1: The user/driver has the option to call the company of the app for customer service if he/she has difficulty resetting the password

Use Case Name: Make Payment	ID: 2	Importance Level: High
Primary Actor: User and Banks	Use Case Type: Detail, essential	
Stakeholders and Interests: User - wants to pay for service Banks - allows User to make payment through card		
Brief Description: This use case describes how users would be able to purchase a service and to check their balance and let banks allow users to be able to purchase service.		

Trigger: When user requests a service and charges card Type: External
Relationships: Association: Users and Banks Include: Check balance Extend:
Normal Flow of Events: 1. User opens app 2. Requests task to be accomplished S-1: Users can check balance on account 3. Use card to pay for task 4. Banks allows User to make charge on card S-2: Banks accept payment from card
SubFlows: None
Alternate/Exceptional Flows: None

Use Case Name: Choose Task	ID: 3	Importance Level: High
Primary Actor: User	Use Case Type: Detail	
Stakeholders and Interests: User - Wants to choose a task to be completed Partnered Businesses - Wants to check stock of the task (in cases such as groceries), and accept the task if they feel it can be completed Driver - Accepts the task if they can so they can be paid		
Brief Description: Allows users to choose a task from a list of available services. Then, drivers and partnered businesses will see the request, and the request will either be accepted or denied.		
Trigger: User selects task from a list to complete their request Type: External		
Relationships: Association: Partnered Businesses and Driver Includes: Check availability of tasks, confirmation of task Extends:		
Normal Flow of Events: 1. User opens app 2. User searches for task 3. User chooses task S-1 S-2		

4. Task is accepted or denied by both the driver and any partnered businesses involved
SubFlows: **S-1:** Partnered businesses check if task can be completed (if necessary) **S-1a:** Partnered Businesses check to make sure the requested items are in stock **S-2:** Distance between driver and task is calculated in order to calculate price
Alternate/Exceptional Flows: None

Use Case Name: Check Requested Tasks	ID: 4	Importance Level: High
Primary Actor: Driver	Use Case Type: Detail, Essential	
Stakeholders and Interests: User → Wants their tasks completed Driver → Needs to make sure they are picking up the correct items for the correct user Partnered Business → Needs to know if the items are in stock prior to the user ordering		
Brief Description: Driver checks to make sure they are picking up the right items, that the items are in stock, and that they are to be delivered to the correct user		
Trigger: Driver accepting the order Type: External		

Relationships: Association: Driver and Phone Companies Include: Accept tasks, location of user and place of tasks (if applicable) is now available Extend:
Normal Flow of Events: 1. Driver opens app 2. Driver looks at orders requested by users 3. Driver selects an order 3a. Driver is notified of the cost of the trip and how much money they will earn 4. Driver confirms the order 4a. A confirmation to the user that their items are currently being picked up
SubFlows: None
Alternate/Exceptional Flows: None

Use Case Name: Enable Location (Driver)	ID: 5	Importance Level: High
Primary Actor: Driver	Use Case Type: Essential, Detail	
Stakeholders and Interests: User - Want to see how far away local drivers are Partnered Businesses - See how many drivers are in the area Driver - See location of nearby partners and customers		
Brief Description: Allows drivers to see where partnered businesses and users are while also uploading their location continuously for businesses and users.		
Trigger: Opening App Type: External		
Relationships: Association: Phone Companies and Users Include: Extend:		
Normal Flow of Events: 1. Driver opens App 2. Phone services enables location of driver's mobile device 3. App displays the location of users who are requesting for a driver		
SubFlows: None		

Alternate/Exceptional Flows: None

Use Case Name: Enable Location (User)	ID: 6	Importance Level: High
Primary Actor: User	Use Case Type: Essential, Detail	
Stakeholders and Interests: User - Want to see how far away local drivers are Partnered Businesses - See how many drivers are in the area Driver - See location of nearby partners and customer		
Brief Description: Allows users to see where partnered businesses and drivers are while also uploading their location continuously for businesses and drivers.		
Trigger: Opening App Type: External		
Relationships: Association: Phone Companies and Drivers Include: Extend:		
Normal Flow of Events: 1. User opens App 2. Phone services enables location of user's mobile device		

3. App displays the location of nearby drivers to users
SubFlows: None
Alternate/Exceptional Flows: None

Use Case Name: Accept Payment	ID: 7	Importance Level: High
Primary Actor: Driver	Use Case Type: Essential, Detail	
Stakeholders and Interests: User- Sends payment through app to driver when task is completed Driver - Accept payment when task is completed.		
Brief Description: When task is completed the user will pay driver through the app. When payment is sent a confirmation is sent to the driver. Driver clicks to accept payment and confirmation is sent to user.		
Trigger: Opening App Type: External		
Relationships: Association: Users and Banks Include: Transfer payments to the credit/debit card, paypal, etc. Extend:		

Normal Flow of Events: 1. Driver opens App 2. Sees confirmation sent when driver pays 3. Clicks to accept payment S-1: A confirmation sent to both driver when payment has been sent and confirmation sent to user when payment has been accepted
SubFlows: None
Alternate/Exceptional Flows: None