TSAVVY

BCIS 4610.001

System Proposal

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Business Concept Description

TSAVVY is a service-based platform that connects individuals and businesses with skilled tech support professionals on a short-term, contract basis. Similar to Uber or Instacart, TSavvy allows users to post technology-related service requests, which can be accepted by qualified workers who meet the job criteria. The platform streamlines the process of finding and hiring tech-savvy individuals for quick, efficient, and cost-effective solutions.

Additionally, TSAVVY integrates warehouse facilities for delivering necessary equipment to workers, ensuring they have access to the tools required for their jobs. Workers also earn commissions on any equipment purchases made by customers through the platform.

Cost Benefit Analysis

Cost Benefit Analysis

		Current Year (CY)	CY +1	CY +2	CY +3	CY +4	CY +5	
Costs								
F	Warehouse Space (6000 SF)	$ 60,000.00	$ 60,000.00	$ 60,000.00	$ 60,000.00	$ 60,000.00	$ 60,000.00	
V	Base Inventory	$ 50,000.00	$ 25,000.00	$ 25,000.00	$ 25,000.00	$ 25,000.00	$ 25,000.00	
F	Dedicated Server Rental	$ 6,000.00	$ 6,000.00	$ 6,000.00	$ 6,000.00	$ 6,000.00	$ 6,000.00	
V	Application Development (including Banking System implementation)	$ 60,000.00	$ 5,000.00	$ 5,000.00	$ 5,000.00	$ 5,000.00	$ 5,000.00	
F	Background Check Services	$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00	
V	Employee Costs	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	
V	Advertising	$150,000.00	$100,000.00	$ 50,000.00	$ 50,000.00	$ 50,000.00	$ 50,000.00	
	Total Costs (Future Value)	$329,000.00	$199,000.00	$149,000.00	$149,000.00	$149,000.00	$149,000.00	
	Total Costs (Present Value)	**$329,000.00**	**$195,098.04**	**$143,214.15**	**$140,406.03**	**$137,652.97**	**$134,953.89**	**$1,080,325.07**
Benefits								
	Service Fees ($10 per job)	$250,000.00	$250,000.00	$250,000.00	$250,000.00	$250,000.00	$250,000.00	
	Membership Plans ($15 a month)	$150,000.00	$150,000.00	$150,000.00	$150,000.00	$150,000.00	$150,000.00	
	Inventory Purchases	$150,000.00	$150,000.00	$150,000.00	$150,000.00	$150,000.00	$150,000.00	
	Total Benefits (Future Value)	$550,000.00	$550,000.00	$550,000.00	$550,000.00	$550,000.00	$550,000.00	
	Total Benefits (Present Value)	**$550,000.00**	**$539,215.69**	**$528,642.83**	**$518,277.28**	**$508,114.98**	**$498,151.95**	**$3,142,402.73**
	Present Value Discout Rate	2%						

Cost Benefit Analysis	
Total PV Benefits	$3,142,402.73
Total PV Costs	$1,080,325.07
NET BENEFIT	**2,062,077.66**

ROI	
ROI	167%

Break-even point	
Total Fixed Cost	$ 67,000.00
Variable Costs (Per Job/Membership)	$ 10.00
Selling Price Per Unit (Job/Membership)	$ 15.00
Break even point (Jobs / Memberships)	$ 13,400.00
Break even point (Revenue)	**$201,000.00**

Overview: TSAVVY is a platform that connects individuals and businesses with skilled tech support professionals for short-term jobs, like Uber or Instacart. Users post tech-related service requests, which approved workers can accept based on their skills and availability. Services are available remotely via phone/video chat or through in-person visits, which have a $10 base charge with flexible pricing. To support workers, TSAVVY operates a warehouse stocked with essential tech tools. Workers can request equipment, and they earn commissions on customer purchases made through the platform. The company also offers a membership program, providing monthly remote support and discounted in person services. Payments are processed through a secure system, ensuring workers are paid promptly, and customers can tip or adjust pricing for faster job acceptance. The platform relies on a mobile app, web interface, cloud hosting, background checks, and secure transactions. Revenue streams include service fees, subscriptions, equipment sales, and flexible job pricing. With fast, convenient service and integrated equipment support, TSAVVY provides an innovative, scalable solution for modern tech support needs.

Technical Feasibility: For TSAVVY to effectively use Business-to-Consumer communication, the company will need to utilize an app and website. Using Eclipse as a Code IDE Java for android devices, Swift for Apple Devices, and HTML for website applications. Code converters are openly available such as Coding Fleet and Code Converter AI to allow the feasibility of cross-platform applications. While renting server space is highly accessible it would preferably be through Amazon, which controls about 33% of the global cloud server space. Operationally, TSAVVY will require a warehouse that can be rented for distribution of inventory and tools to technicians, while using software-as-a-service to manage orders and assignment of materials using HoneyBook. While utilizing Link (By Stripe) as a payment management and banking system. These applications and software today make the existence of TSAVVY highly feasible. For app and website development utilizing an IDE or code converters does not pose much of a risk unless being sent to a third-party company that will be able to have a history of your code and how it works. However, not having your own managed server and utilizing a rented server

space does pose a risk of not being able to determine maintenance times yourself or outages. However, going with a bigger server like Amazon helps minimize those risks. The operational tasks are far riskier than app and development, due to renting a warehouse coming with its own logistical risks, such as supply-chain disruptions. Relying on Software-as-a-service for HoneyPot and Link (By Stripe) comes with similar risks of server management, such as data security, security breaches, issues with financial regulation due to not managing in-house. However, doing research beforehand these platforms have a large consumer base for a reason they are reliable and trust-worthy which minimizes the risk due to using a larger company that helps assist with things like this. This leads to low-risk operation.

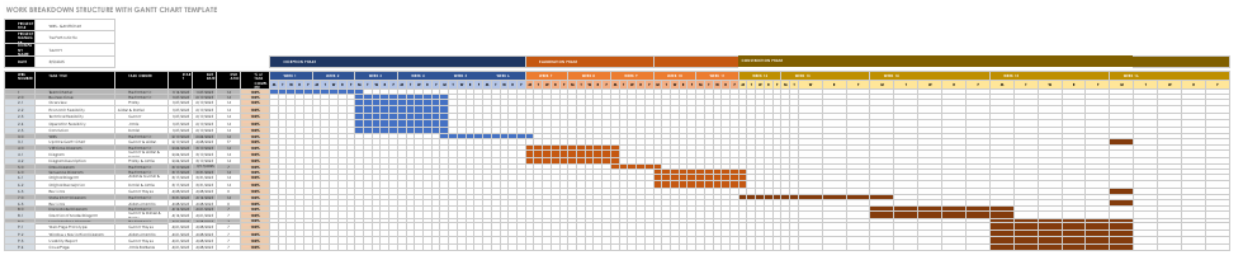
Economic Feasibility: Most of the initial investment and expenses will be incurred during the first year of opening and operations, as we need to purchase our key infrastructure items. Warehouse space, base inventory, and application development will be the most expensive infrastructure purchases we incur. Year-to-year rental of warehouse space is expected to cost $60,000 for 6000 SF of space. An initial investment of $50,000 in base inventory related to technology is expected, with an additional investment of $25,000 every year after maintaining a consistent inventory of 50% or more of the initial investment. Application development will be a one-time initial investment of $60,000, including the implementation of a secure banking system. There will be a $5,000 maintenance cost each year afterwards to keep the software up to date, patch any bugs, and pay any app store fees. After the initial infrastructure is set up, advertising will be the most expensive cost we incur, with a first-year cost of $150,000. Second-year costs will be $100,000, and every year after that will be $50,000. The least expensive costs will be dedicated server rental at $6,000 a year and background check services at $1,000 a year. Service Fees that TSAVVY charges per job will be the largest portion of our revenue. With an expected 25,000 total jobs completed per year across the DFW Area, our expected year-to-year revenue is $250,000. The available membership plans that include tech support and other benefits will bring an expected revenue of $150,000 per year. Inventory purchases will also bring in $150,000 per year as customers and workers will need to source the necessary equipment from us.

Organizational Feasibility: We will establish TSAVVY LLC to protect ownership interests and ensure flexibility. Key roles will include a CEO/Founder, Operations Manager, Tech Lead, Customer Support Team, and a Legal & Compliance Advisor to oversee daily operations, including job postings, worker verification, background checks, and equipment distribution. Our launch schedule will be divided into phases: Months 1-3 for business registration and initial app development, Months 4-6 for warehouse setup and beta testing, Months 7-9 for the official launch, and Months 10-12 for expansion and platform improvements. Legally, we will register as an LLC, obtain an Employer identification number, and file Articles of Organization and an Operating Agreement to define ownership and responsibilities. We will draft Terms of Service, Privacy Policies, Independent Contractor Agreements, and Supplier Contracts to protect our business and users. Liability insurance will cover risks like worker injuries or customer disputes. TSAVVY must comply with key political and regulatory laws to operate legally. For background

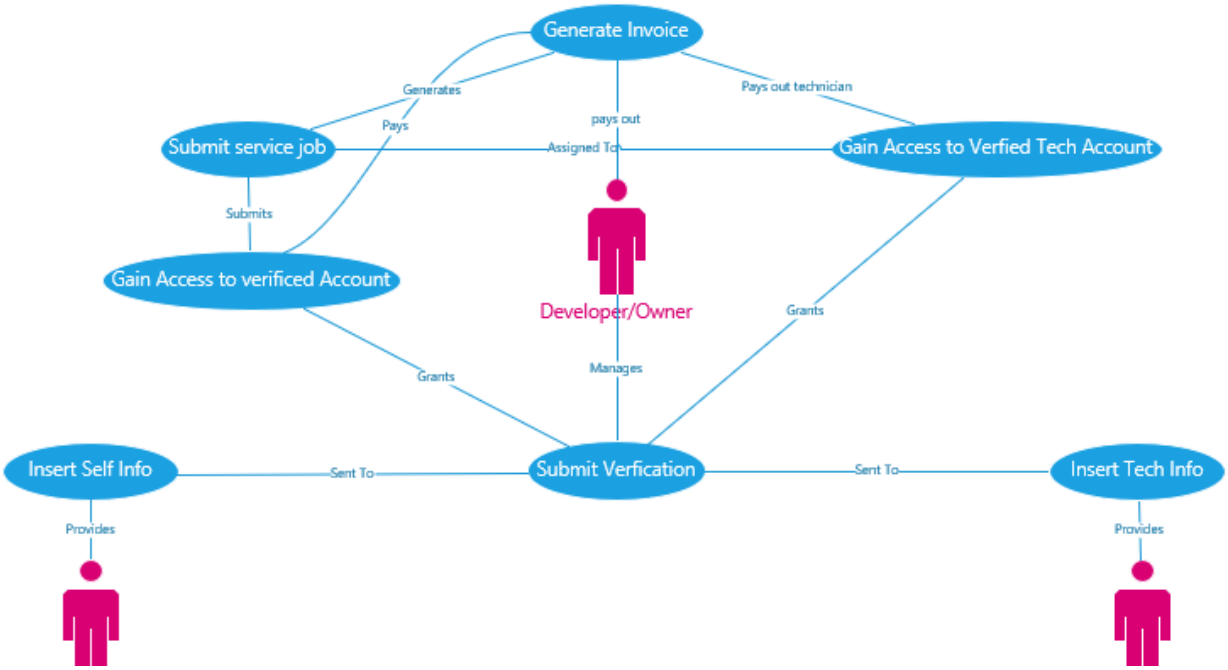
checks, we will follow the Fair Credit Reporting Act, which mandates worker consent and transparency. Anti-money laundering laws help prevent fraud in financial transactions, while the Payment Card Industry Data Security Standard ensures secure credit card processing. Our warehouses and worker safety must meet Occupational Safety and Health Act regulations to prevent workplace hazards. We will also work with legal experts, implement security measures, and monitor labor and financial regulations. To handle legal complexities, we will work with a Corporate Lawyer for business structuring, an Employment & Contractor Attorney to ensure gig worker compliance, an Intellectual property Lawyer for trademarks, and a Privacy & Compliance Specialist for data security and payment regulations. The next steps include finalizing LLC registration, securing business insurance, drafting legal agreements, and ensuring compliance with labor and payment laws.

Final Summary TSAVVY is a highly feasible business with a strong foundation in technology, operational efficiency, and financial sustainability. By leveraging cloud infrastructure, secure payment processing, and on-demand service models, TSAVVY ensures a scalable and reliable platform for tech support services. The business model, supported by multiple revenue streams—including service fees, subscriptions, and equipment sales—projects an annual revenue of $550,000, positioning the company for long-term profitability despite initial investment costs. While third-party dependencies and operational logistics pose potential risks, these are mitigated through partnerships with established providers like Amazon Web Services and Stripe, ensuring reliability and security. Additionally, a well-structured organizational and legal framework ensures compliance with industry regulations, protecting both users and workers. With a clear phased launch plan, strong market demand for flexible tech support, and an innovative approach to connecting professionals with customers, TSAVVY is well-positioned for success and has the potential to disrupt the tech support industry with its efficient and customer-focused model.

Project Plan/ Gantt Chart



Use Case Diagram



1. **Customer Register User Account**

a. Customers create an account via the TSAVVY app or website.

b. Required information includes name, email, phone number, and payment details.

c. Users must verify their email/phone number for security.

d. Option to enroll in membership plans for extra benefits.

2. **User Account Request Service Job**

a. Customers submit service requests detailing the issue, location, and urgency.

b. They choose between remote assistance or in-person visits.

c. Pricing is dynamic, with a base charge and optional tipping.

d. Technicians can accept jobs based on their skills and availability.

3. **Potential Employee/Technician Applying for Job**

a. Technicians create a profile with skills, experience, and availability.

b. A background check and identity verification are required.

c. They can request necessary tools from TSAVVY's warehouse.

d. Earnings are commission-based with additional revenue from equipment sales.

4. **Verification Process with Certified Badge for Employees and Customers**

a. Employees undergo a background check before receiving a verified badge.

b. Customers can also verify their identity for increased trust and security.

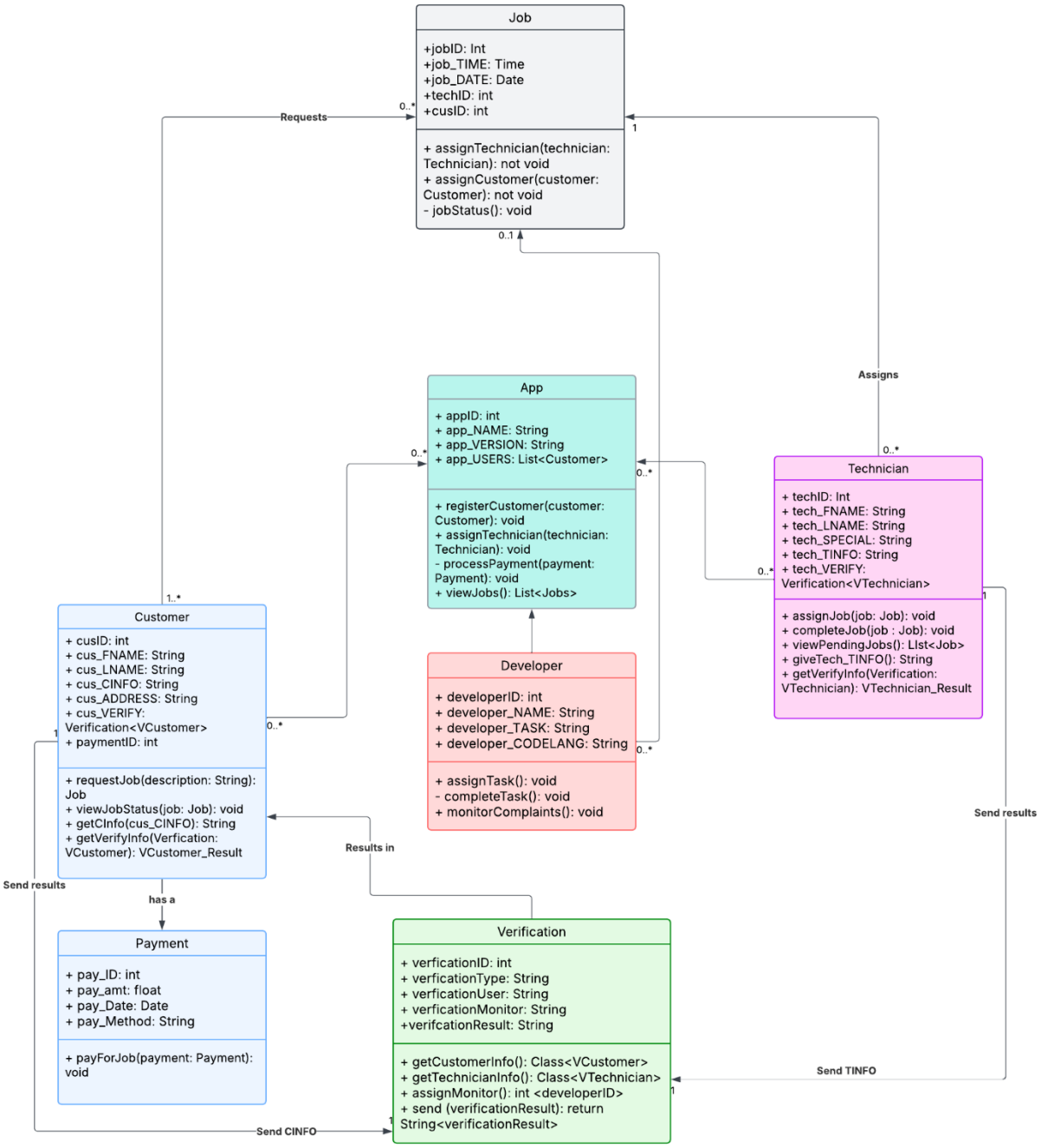
c. Verified accounts gain priority access to jobs and additional security features.

d. Certification ensures compliance with TSAVVY's quality and safety standards.

5. **Payment and Transactions**

- TSAVVY provides secure and flexible payment options for customers and technicians.
- **Accepted Payment Methods:** Credit/debit cards, digital wallets, and TSAVVY account balance.
- **Automatic Billing:** Customers are charged upon job completion.
- **Membership Payments:** Recurring charges for enrolled members with the option to cancel anytime.
- **Technician Payouts:** Earnings are processed weekly via direct deposit or preferred payment method.
- **Refunds & Disputes:** Customers can request refunds for service issues, subject to review.

Class Diagram



Job: A service task requested by the customer, assigned to a technician, and monitored by a developer.

App: Stores the App ID, App Name, App Version, and App Users. Allows customers to register for an account, assigns technicians to jobs, processes payments, and displays active service jobs. Acts as the association class for Customer, Jobs, and Technicians.

Customer: Holds personal information, verification status, and payment ID details. Enables customers to request a service job and track job status.

Technician: Manages job assignments and completions. Tracks pending work and applies expertise based on specialization and experience.

Developer: Maintains the app and monitors processes within the Job class to ensure smooth operation.

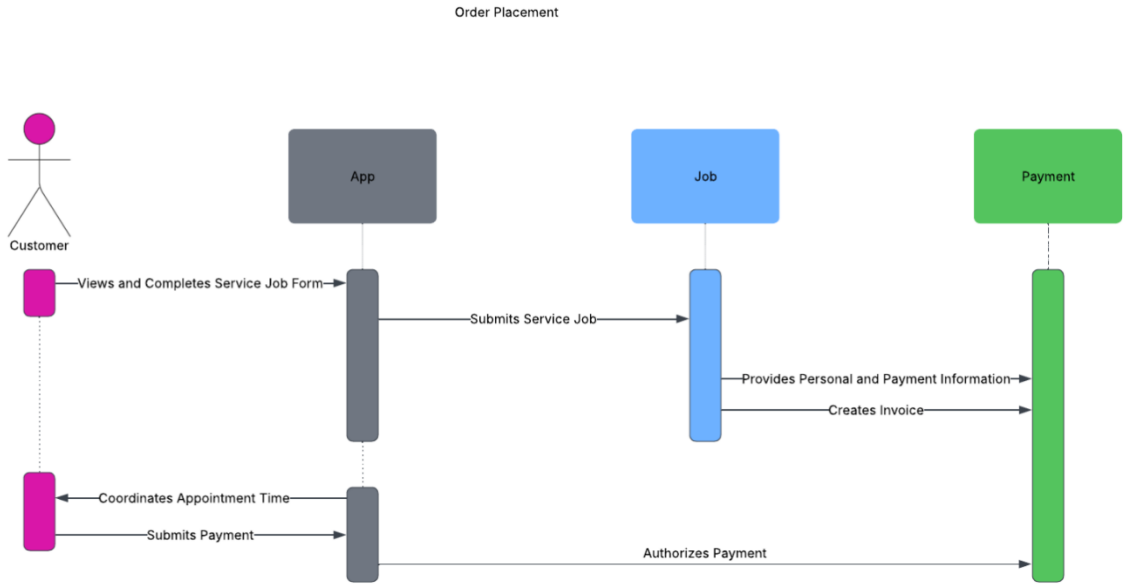
Payment: Acts as an aggregation class for Customer, storing payment information and handling payment processes essential to the business lifecycle.

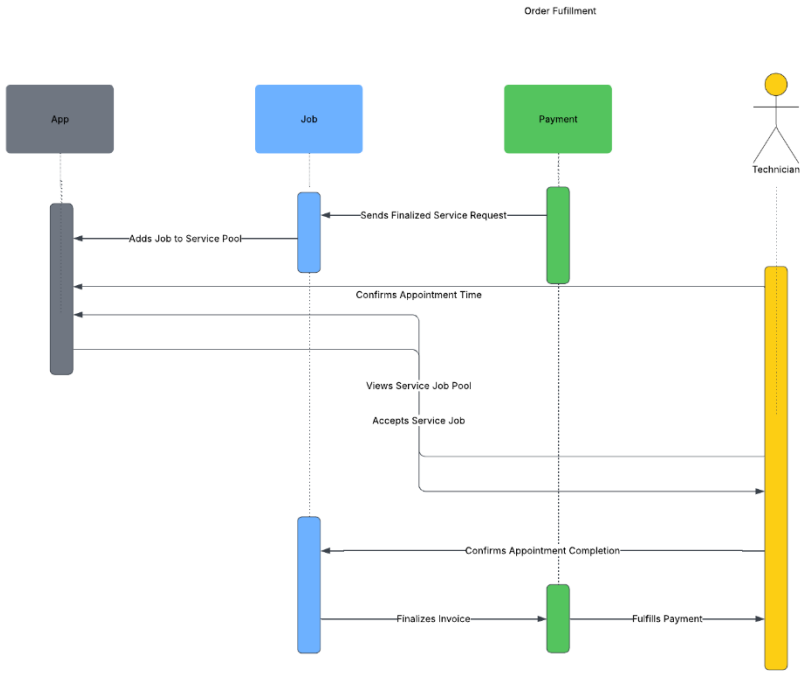
Verification: Takes customer (cus_CINFO) or technician (tech_TINFO) information from the VCustomer and VTechnician classes, assesses its legitimacy, and returns the verificationResults String to those classes.

VCustomer: A subclass of Verification that retrieves customer information (cus_CINFO) from the Customer class, sends it to the Verification class, and returns the verificationResults String to the Customer class for verification.

VTechnician: A subclass of Verification that retrieves technician information (tech_TINFO) from the Technician class, sends it to the Verification class, and returns the verificationResults String to the Technician class for verification.

Sequence Diagram





Objects Description

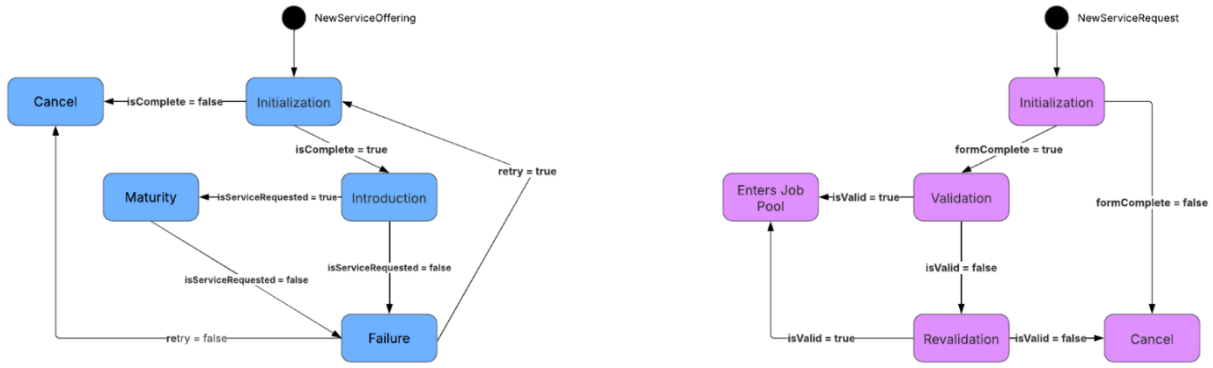
App: A platform that lets customers request job services and puts in personal and payment information. It allows technicians to view and accept the job.

Job: Is requested by the customer and accepted by a technician. Manages the service job, creates, and finalizes invoices.

Payment: Takes care of the customer's payment details, completes transactions, and ensures the technician gets paid when the service is done.

The entirety of the system uses the same objects for accessibility.

State Chart Diagram



Object State's Descriptions

Object Class: CustomerOrder

This state chart diagram models the life cycle of a CustomerOrder object created when a user places an order online. The final state of the object is a successfully completed job (order fulfilled and delivered) or cancellation.

STATE DEFINITIONS AND TRANSITIONS

🔵 Initialization

- **Definition:** The order process begins when a user indicates interest in taking a job.
- **Transition Events:**
  - If acceptJob = true, the state transitions to **Acceptance**.
  - If acceptJob = false, the state transitions to **Cancel**.

🔵 Acceptance

- **Definition:** The user has accepted the job and is actively working on it.
- **Transition Events:**

- If isComplete = true, the job transitions to **Job Complete**.
- If isComplete = false, the job transitions to **Job Failed**.

🔵 **Job Complete**

- **Definition:** The job has been completed successfully, and the order is considered fulfilled.
- **Final State.**

🔵 **Job Failed**

- **Definition:** The job was attempted but could not be completed due to some issue.
- **Transition Events:**
- If retry = true, the order re-enters the job pool (**Enters Job Pool**).
- If retry = false, the process ends in **Cancel**.

🔵 **Cancel (from Job path)**

- **Definition:** The job was either not accepted, failed without a retry, or was manually canceled.
- **Final State.**

🔵 **Enters Job Pool**

- **Definition:** The job is placed in a queue awaiting validation or assignment after failing once or being introduced through a service request.
- **Transition Events:**
- If isAccept = true, it returns to **Initialization** to restart the process.
- If isAccept = false, it moves to **Initialization** of the **NewServiceRequest** path.
- If isValid = true, it can be validated again in the **Validation** step.

Object Class: Product (Used as New Service Request)

This state chart also models a Product-like process where a new service request is submitted. The final state is either validation leading to a job or a cancellation due to invalid data.

STATE DEFINITIONS AND TRANSITIONS

Initialization (Service Request)

- **Definition:** A new product or service request is initialized by the system.
- **Transition Events:**
  - If formComplete = true, the state transitions to **Validation**.
  - If formComplete = false, the state transitions to **Cancel**.

Validation

- **Definition:** The form or request is evaluated for completeness and correctness.
- **Transition Events:**
  - If isValid = true, it proceeds to **Enters Job Pool**.
  - If isValid = false, it goes to **Revalidation**.

Revalidation

- **Definition:** A failed request is rechecked after correction.
- **Transition Events:**
  - If isValid = true, it returns to **Enters Job Pool**.
  - If isValid = false, the process ends at **Cancel**.

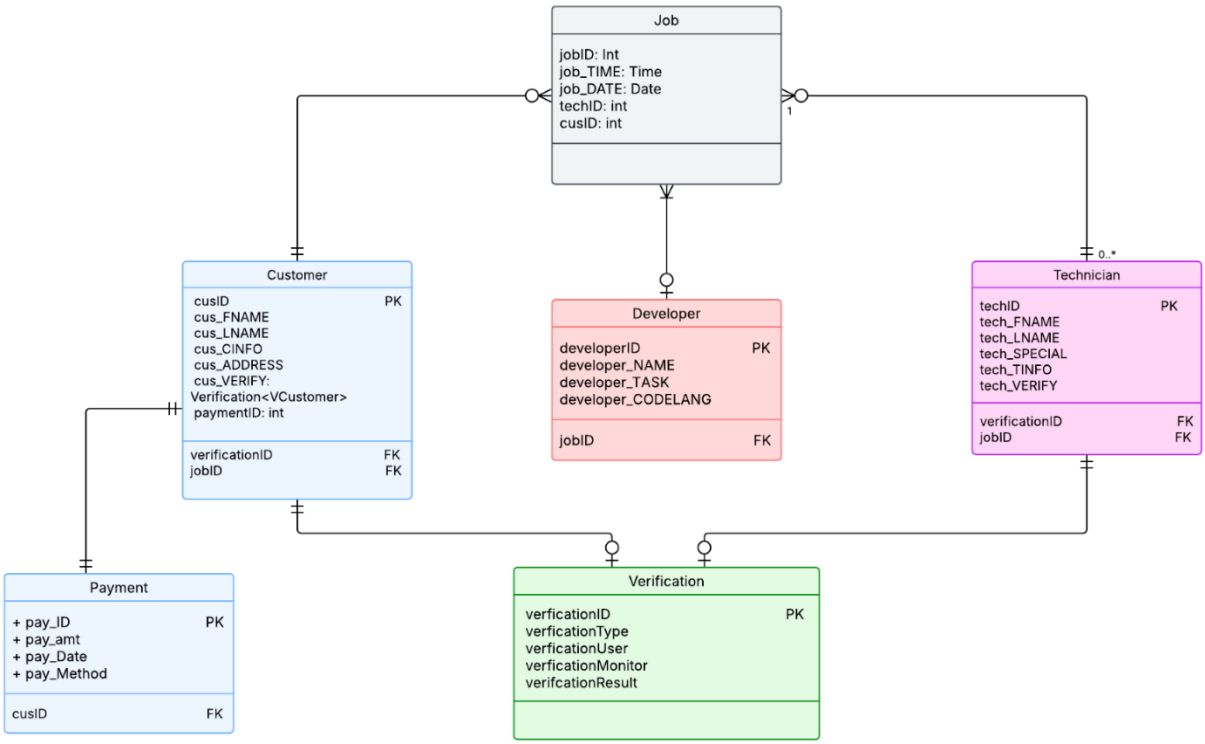
Cancel (from Service path)

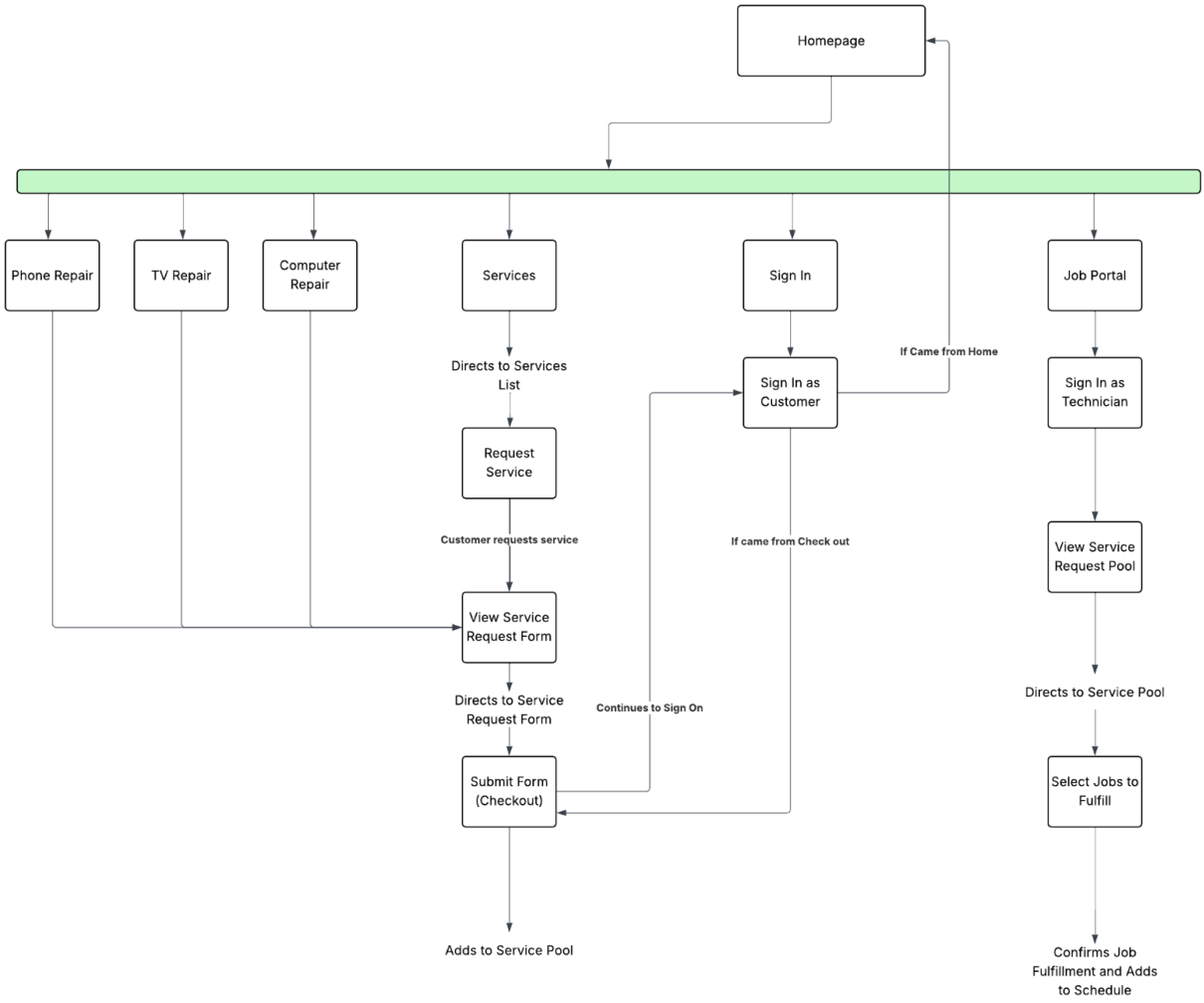
- **Definition:** The service request is terminated either due to incomplete information or validation failure.
- **Final State.**

State Chart Summary

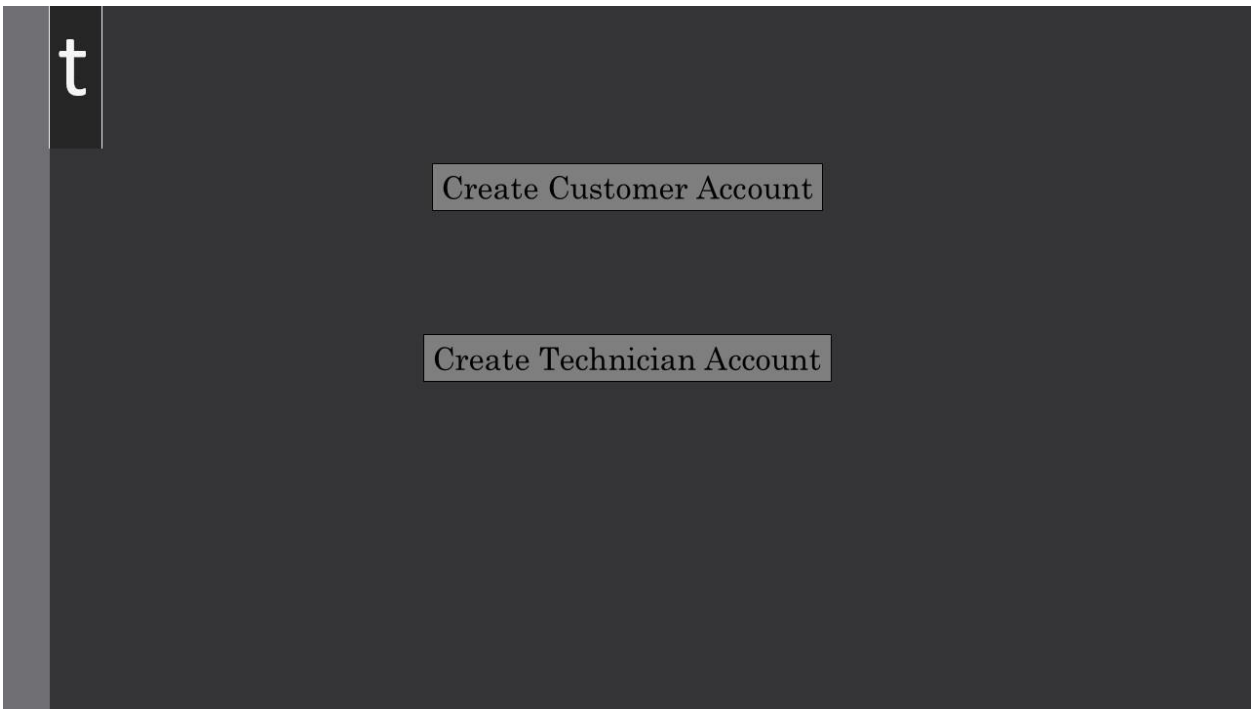
State	Type	Definition
Initialization	Common	The process starts here—either job or request is initialized.
Acceptance	Job	The user accepts the job.
Job Complete	Job (End)	The job was successfully finished.
Job Failed	Job	Job failed and is queued or canceled.
Cancel	Common (End)	The process ends due to rejection, failure, or invalid data.
Enters Job Pool	Shared	Job/request enters waiting/validation pool.
Validation	Request	The form or request is checked for accuracy.
Revalidation	Request	The invalid request is rechecked after resubmission.

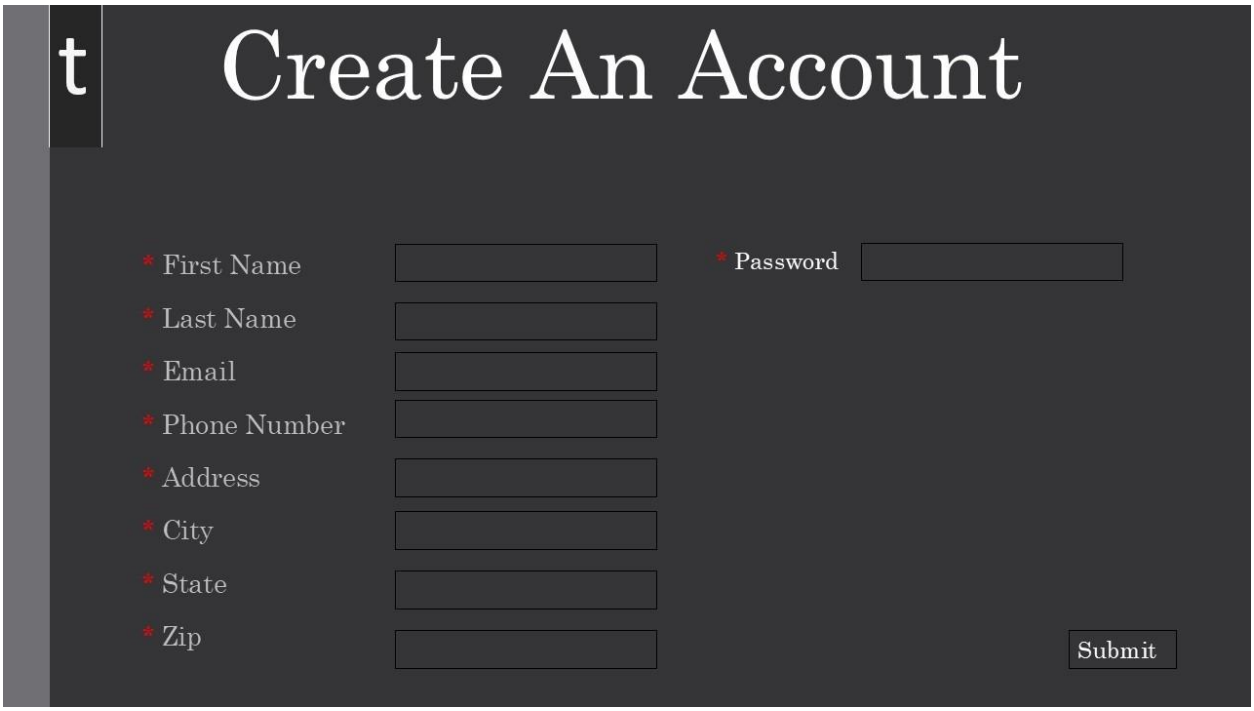
Data Model Diagram

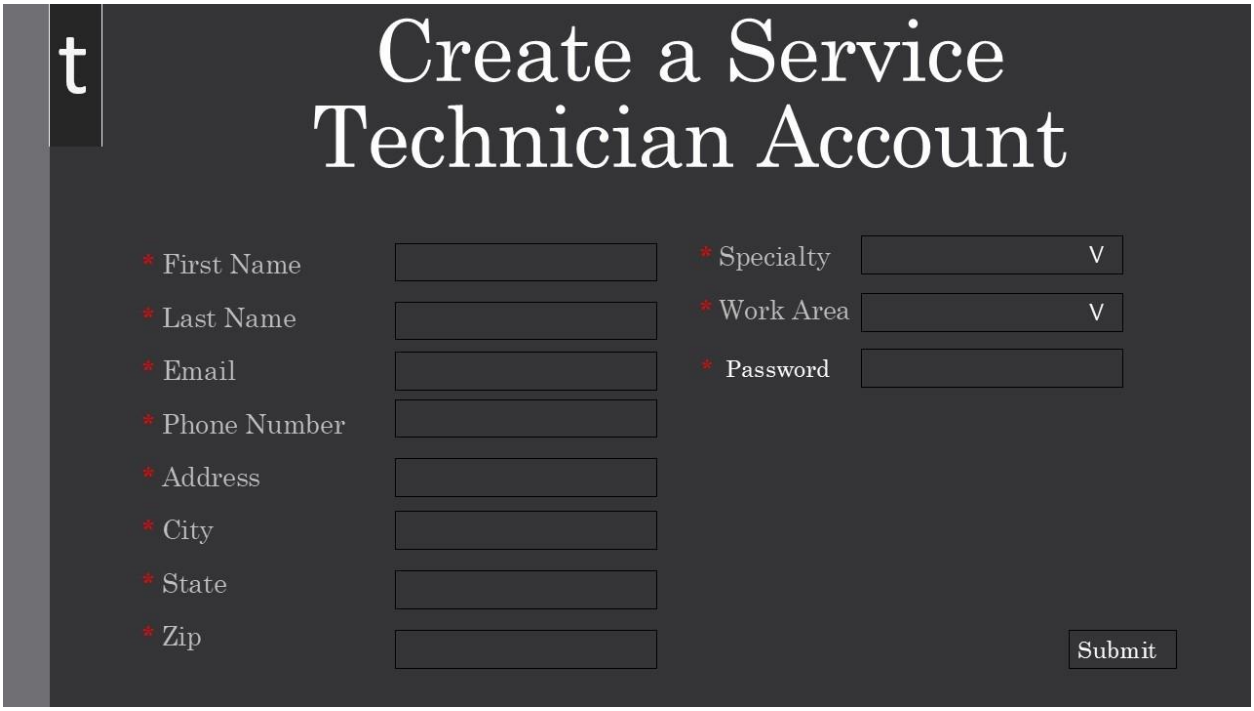



Homepage
Phone Repair
TV Repair
Computer Repair
Services
Sign In
Job Portal
Directs to Services List
Request Service
Customer requests service
View Service Request Form
Directs to Service Request Form
Submit Form (Checkout)
Adds to Service Pool
Sign In as Customer
If Came from Home
If came from Check out
Continues to Sign On
Sign In as Technician
View Service Request Pool
Directs to Service Pool
Select Jobs to Fulfill
Confirms Job Fulfillment and Adds to Schedule

Windows Navigation Diagram/User Interface Diagram

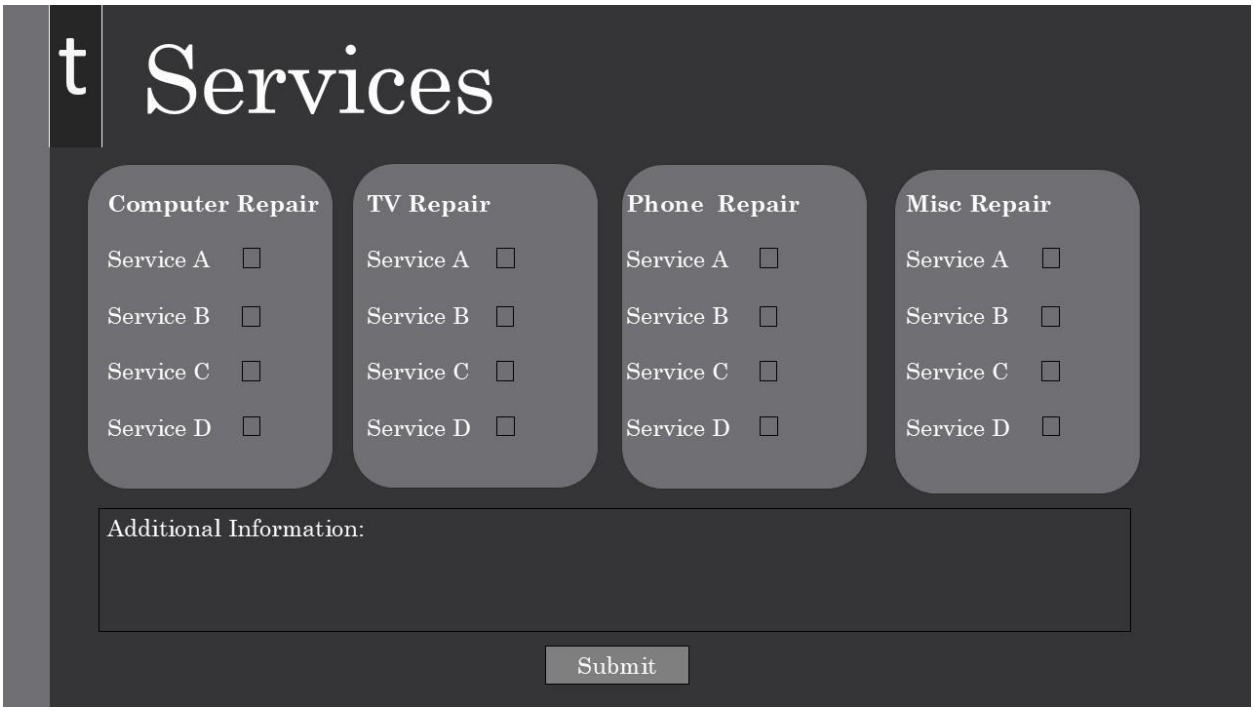


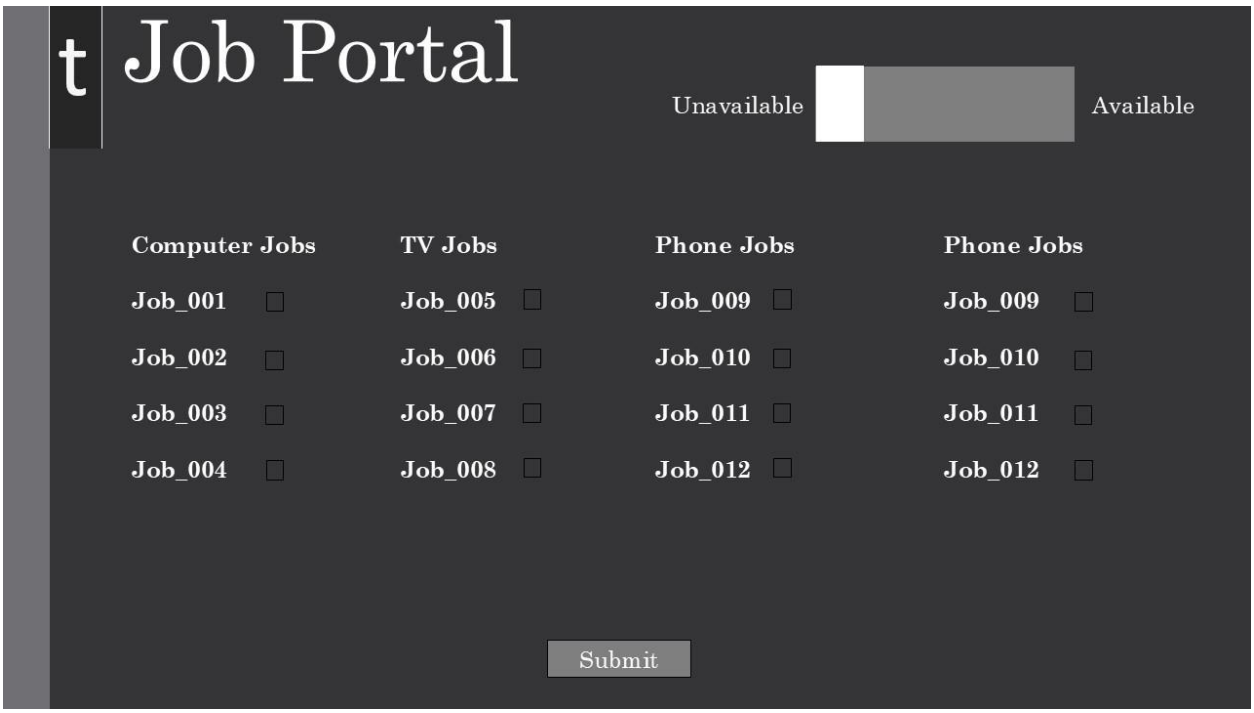

t
Create An Account
* First Name
* Last Name
* Email
* Phone Number
* Address
* City
* State
* Zip
* Password
Submit

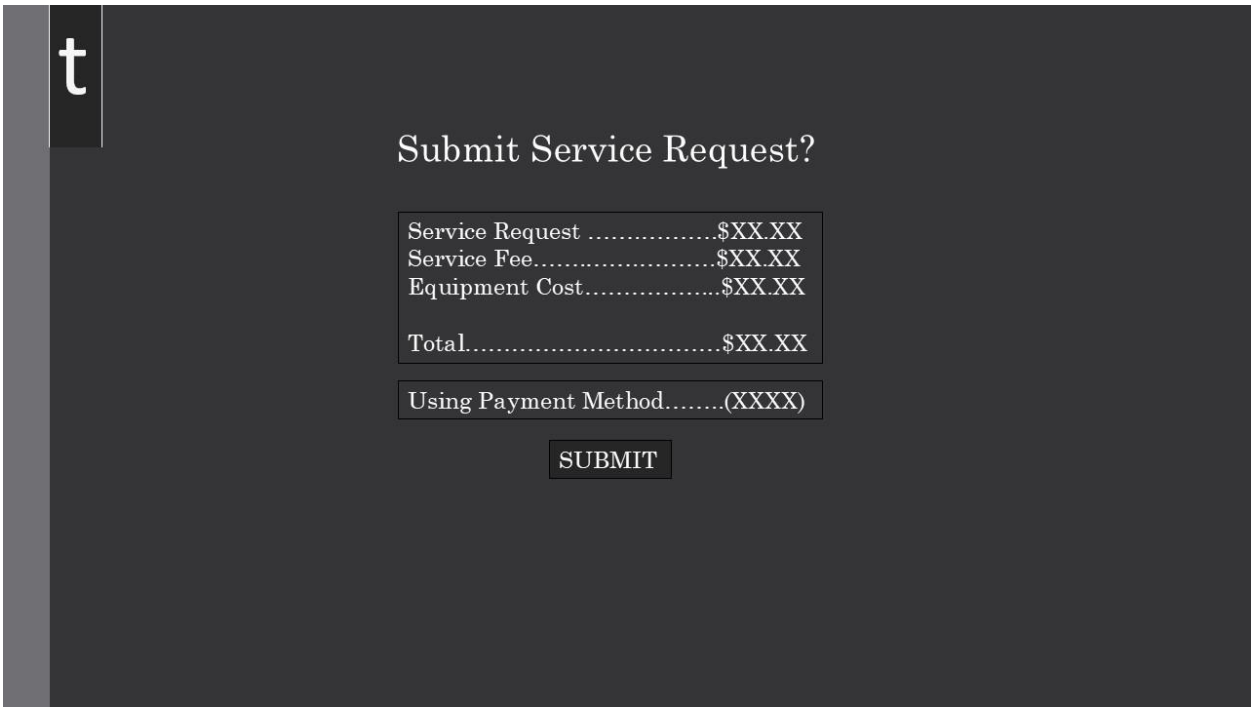

t
Create a Service Technician Account
* First Name
* Last Name
* Email
* Phone Number
* Address
* City
* State
* Zip
* Specialty
* Work Area
* Password
Submit


t
Customer Sign In
Email
Password
Sign In
Forgot Password?

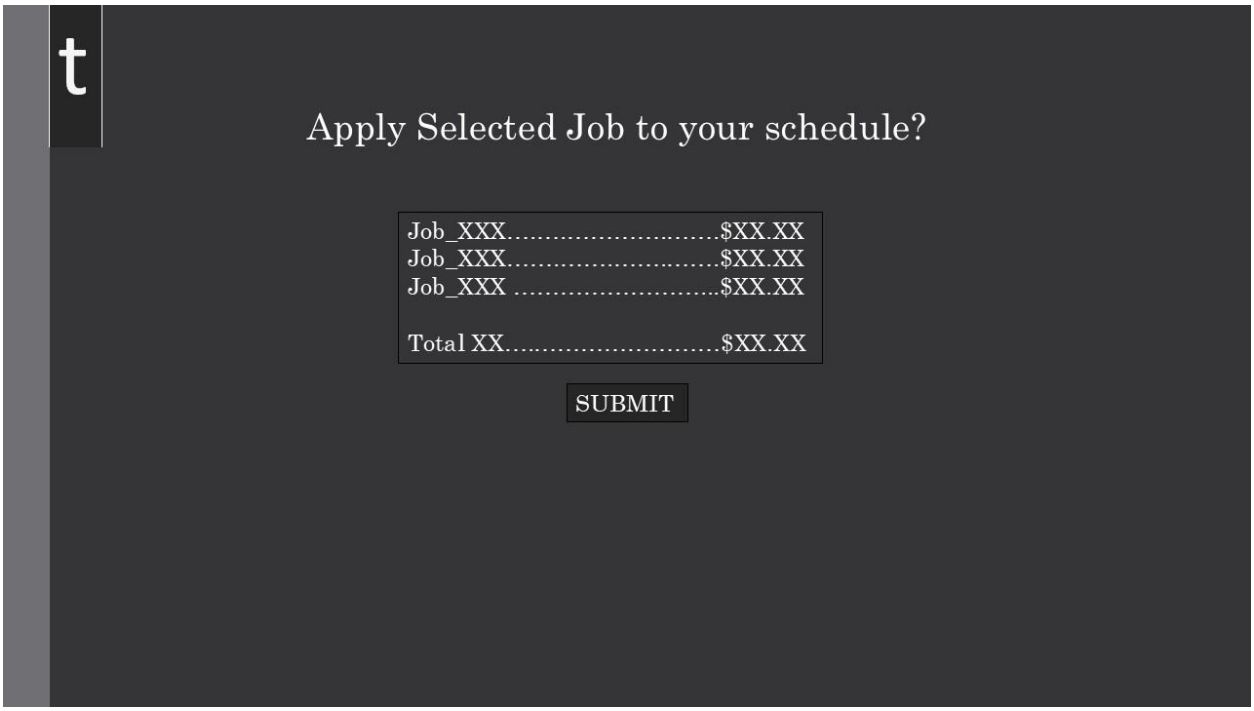

t
Technician Sign In
Email
Password
Sign In
Forgot Password?

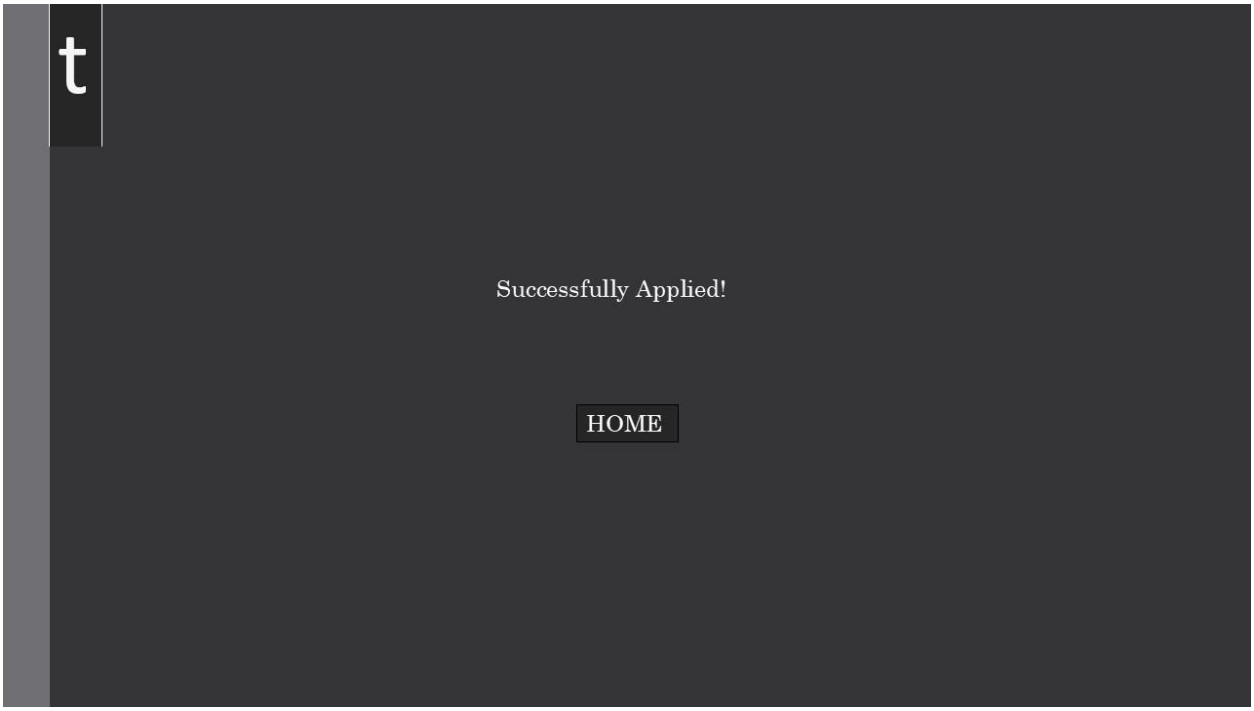

t
Services
Computer Repair
Service A
Service B
Service C
Service D
TV Repair
Service A
Service B
Service C
Service D
Phone Repair
Service A
Service B
Service C
Service D
Misc Repair
Service A
Service B
Service C
Service D
Additional Information:
Submit


t
Job Portal
Unavailable
Available
Computer Jobs
Job_001
Job_002
Job_003
Job_004
TV Jobs
Job_005
Job_006
Job_007
Job_008
Phone Jobs
Job_009
Job_010
Job_011
Job_012
Phone Jobs
Job_009
Job_010
Job_011
Job_012
Submit


Submit Service Request?
Service Request ……$XX.XX
Service Fee……$XX.XX
Equipment Cost……$XX.XX
Total……$XX.XX
Using Payment Method……(XXXX)
SUBMIT


Successfully Submitted!
HOME


Apply Selected Job to your schedule?
Job_XXX……$XX.XX
Job_XXX……$XX.XX
Job_XXX ……$XX.XX
Total XX…..……$XX.XX
SUBMIT


Successfully Applied!
HOME

Usability Testing Report for WND

For the website interface to be judged as accurately as possible I used a sample pool of 3 people. A Maximo systems architect for Boeing, an HR coordinator For Keller, and A title loan officer for Titlemax. Who reviewed and provided feedback and suggestions for the site and some of which were taken into consideration.

When it came to the homepage of the site the feedback varied from the likeness of its simplicity and easy to read design to the confusing input of how to navigate through and why there was not much information. Including “Clean and sleek with a more user-friendly vibe, not much to get confused on” and “What does this site mean, and I feel it needs additional information”. To correct this I added more input onto the homepage of the website to allow for a better understanding by researching some other websites that have a better layout of design to allow for a better introductory feeling and keep the same user-friendly vibe.

When creating the Sign-on page, there is not too much to critique due to a non-imaginative design, however the first time around there were a few inputs including “Why is there no forgot password” and “Why do you use one sign-on for customers and technicians”. Simple inputs like that caused me to adjust the Diagram of usability of the website to allow for a job portal sign-on specifically for technicians to use and be able to sign in and view their jobs which now leads to a sign-on page.

The most important function of the Website was the Services function to allow customers to select their service, when first going through forced customers to sign in before being able to add to their service and pricing out. However needing to do that allows for less likely to ever make it to the cart, which was thought of through the 3-click rule and the input provided by the Maximo architect “I would allow users to be able to select services and add to cart before logging in, get them to cart fast before they begin rethinking buying” which is why we redesigned the beginning to allow to click a specifically needed service or service before needing to sign in which will also be changed in the cart.

Due to the reviews of others, the entire website changed however there were some options that we're not changed including the checkout screens and the Job selection screen was added due to them not having any comments about that.

EXECUTIVE SUMMARY

Our project has made significant progress in developing a platform that connects individuals and businesses with skilled tech support professionals on a short-term, contract basis. Key accomplishments include:

Business Concept Development: A clear description of the service, including its integration with warehouse facilities for equipment delivery and commission-based earnings for workers.

Cost-Benefit Analysis: A thorough feasibility study covering technical, economic, and organizational aspects, projecting an annual revenue of $550,000.

Project Plan: A detailed Gantt chart outlining the work timeline schedule, from project proposal to usability test report.

System Design: Comprehensive diagrams, including Use Case, Class, Sequence, State Chart, and Data Model diagrams, to visualize system functionality and workflows.

User Interface Design: Mockups of the app and website interfaces refined based on usability testing feedback from a diverse sample group.

Outstanding Tasks:

While substantial progress has been made, the following tasks remain:

App and Website Development: Finalize coding and testing for cross-platform compatibility (Android, iOS, and web).

Warehouse Setup: Secure and stock the warehouse with necessary equipment for technician use.

Beta Testing: Conduct extensive testing with real users to identify and resolve bugs or usability issues.

Official Launch: Execute marketing campaigns to attract customers and technicians to the platform.

Compliance and Legal Documentation: Finalize Terms of Service, Privacy Policies, and Independent Contractor Agreements.

Legal and Compliance Framework: Establishment of TSAVVY LLC, with plans for liability insurance, worker verification, and adherence to regulatory requirements.

Enhancement Suggestions:

Once the original user requirements are implemented, consider the following enhancements:

AI-Powered Matching: Use machine learning to improve job matching between technicians and customers based on skills, location, and urgency.

Expanded Membership Benefits: Introduce tiered membership plans with additional perks, such as priority support or exclusive discounts.

Enhanced Equipment Management: Implement real-time tracking for warehouse inventory to ensure timely delivery of tools.

Community Features: Add forums or chat options for technicians to share tips and collaborate on complex jobs.

Advanced Analytics: Provide technicians and customers with performance metrics and service history for better decision-making.

Recommendations for Proceeding:

To ensure the successful launch and growth of TSAVVY, the following steps are recommended:

1. Prioritize Beta Testing: Gather feedback from early users to refine the platform before full-scale launch.

2. Strengthen Marketing Efforts: Focus on targeted advertising to attract both customers and skilled technicians.

3. Monitor Financial Performance: Track revenue streams closely, particularly service fees, subscriptions, and equipment sales, to ensure profitability.

4. Invest in Security: Continuously update security measures to protect user data and payment transactions.

5. Scale Gradually: Expand operations to additional regions based on demand and operational capacity.

TSAVVY is well-positioned to disrupt the tech support industry with its innovative, scalable model. By addressing the remaining tasks and exploring future enhancements, the platform can achieve long-term success and customer satisfaction.