

Phase 1 Project Plan & Cost Breakdown

Barbershop Booking System - Production Launch

Prepared for: Client

Prepared by: Freelance Software Engineer

Date: November 5, 2025

Version: 2.0

Project Start Date: November 1, 2025

Expected Completion: November 29, 2025

Executive Summary

This document outlines Phase 1 deployment of the Barbershop Booking System, focusing on launching authentication management and booking flow without payment integration. Total project budget: **\$4,950** over 4 weeks.

Current Status (as of Nov 5, 2025)

Weeks 1-2 COMPLETED - Frontend development, booking flow, and user management

Week 3 IN PROGRESS - AWS deployment and infrastructure setup

Week 4 PENDING - Production testing and launch

Project Scope - Phase 1

Deliverables

Complete Frontend Integration - User authentication pages (Login, Register, Forgot Password, Email Verification) - User profile management - Booking flow with real-time availability - Admin dashboard for user and booking management - Responsive design for mobile and desktop

Backend Refinement & Testing - API endpoint testing and optimization - Bug fixes and error handling improvements - Security hardening - Performance optimization

AWS Infrastructure Setup - EC2 instance configuration - RDS PostgreSQL database - S3 for static assets - Route 53 DNS configuration - SSL/TLS certificate setup - CloudWatch monitoring

Deployment & DevOps - CI/CD pipeline setup - Docker containerization - Environment configuration - Database migrations - Automated backups

Documentation & Handover - User manual - Admin guide - API documentation - Deployment documentation - Maintenance guide

Out of Scope (Future Phases)

Payment gateway integration (Stripe/PayPal)

SMS notifications

Advanced analytics dashboard

Mobile native apps
Multi-location support

Project Timeline with Dates

Week	Dates	Phase	Hours	Status	Payment
Week 1	Nov 1-5	Frontend Development	40	COMPLETED	\$1,000
Week 2	Nov 6-12	Integration & Testing	40	COMPLETED	\$1,000
Week 3	Nov 13-19	AWS Deployment	40	IN PROGRESS	\$1,000
Week 4	Nov 20-29	Testing & Launch	30	PENDING	\$750
TOTAL			150		\$3,750

Detailed Timeline Breakdown

Week 1: Frontend Development (Nov 1-5, 2025) - COMPLETED

Status: All tasks completed

Hours Worked: 40 hours

Payment Earned: \$1,000

Date	Task	Hours	Status
Nov 1-2	Authentication UI <ul style="list-style-type: none">- Login page with validation- Registration page with email verification- Forgot password flow- Reset password page- Email verification confirmation page	16	Done
Nov 3-4	User Features <ul style="list-style-type: none">- User profile page (view/edit)- Change password functionality- Booking history view- Booking cancellation flow- Auth context and protected routes	16	Done
Nov 5	Admin Dashboard <ul style="list-style-type: none">- User management table- Booking management interface- Status update controls	8	Done

Date	Task	Hours	Status
	- Dashboard overview		

Week 2: Integration & Testing (Nov 6-12, 2025) - COMPLETED

Status: All tasks completed

Hours Worked: 40 hours

Payment Earned: \$1,000

Date	Task	Hours	Status
Nov 6-7	API Integration	16	Done
	- Connect frontend to backend APIs		
	- Handle authentication tokens		
	- Implement error handling		
	- Add loading states and feedback		
	- Form validation integration		
Nov 8-11	Testing & Bug Fixes	16	Done
	- Unit testing critical components		
	- Integration testing end-to-end flows		
	- Cross-browser testing		
	- Mobile responsiveness testing		
	- Bug identification and fixes		
Nov 12	Security & Performance	8	Done
	- Security audit and hardening		
	- Performance optimization		
	- Code review and refactoring		
	- Documentation of code changes		

Week 3: AWS Infrastructure & Deployment (Nov 13-19, 2025) - IN PROGRESS

Status: Currently working on this phase

Hours Budgeted: 40 hours

Payment to Earn: \$1,000

Current Date: Nov 5, 2025

Date	Task	Hours	Status
Nov 13-14	AWS Setup	16	Pending
	- Create AWS account and configure IAM	3	
	- Set up VPC, subnets, security groups	4	
	- Launch EC2 instance (t3.small)	3	

Date	Task	Hours	Status
Nov 15-18	- Configure RDS PostgreSQL instance	3	Pending
	- Set up S3 bucket for static files	2	
	- Configure Route 53 for DNS	1	
	Server Configuration	16	
	- Install Docker and Docker Compose on EC2	4	
	- Configure Nginx as reverse proxy	3	
	- Set up SSL with Let's Encrypt	2	
	- Configure environment variables	2	
	- Database migration and seeding	3	
	- Set up CloudWatch monitoring	2	
Nov 19	CI/CD Pipeline	8	Pending
	- GitHub Actions workflow setup	3	
	- Automated testing on push	2	
	- Automated deployment to EC2	2	
	- Database backup automation	1	

Week 4: Testing, Launch & Handover (Nov 20-29, 2025) - PENDING

Status: Not started yet

Hours Budgeted: 30 hours

Payment to Earn: \$750

Date	Task	Hours	Status
Nov 20-22	Production Testing	16	Pending
	- End-to-end testing on production	4	
	- Load testing with realistic traffic	4	
	- Security penetration testing	4	
	- Email delivery testing	2	
	- Database backup/restore testing	2	
Nov 25-26	Launch Preparation	8	Pending
	- Final deployment	2	
	- DNS propagation verification	1	
	- SSL certificate verification	1	
	- Create default admin account	1	
	- Populate initial data (services, barbers)	2	
	- Client walkthrough	1	
Nov 27-29	Documentation & Handover	6	Pending
	- User guide with screenshots	2	
	- Admin manual	1	
	- API documentation update	1	
	- Maintenance procedures	1	

Date	Task	Hours	Status
	- Final client training session	1	

Cost Breakdown

Development Costs (150 hours × \$25/hr = \$3,750)

Task	Hours	Rate	Cost
Frontend Development	40	\$25/hr	\$1,000
- Authentication UI	16	\$25/hr	\$400
- User Features	16	\$25/hr	\$400
- Admin Dashboard	8	\$25/hr	\$200
Integration & Testing	40	\$25/hr	\$1,000
- API Integration	16	\$25/hr	\$400
- Testing & Bug Fixes	16	\$25/hr	\$400
- Security & Performance	8	\$25/hr	\$200
AWS & Deployment	40	\$25/hr	\$1,000
- AWS Infrastructure Setup	16	\$25/hr	\$400
- Server Configuration	16	\$25/hr	\$400
- CI/CD Pipeline	8	\$25/hr	\$200
Testing & Documentation	30	\$25/hr	\$750
- Production Testing	16	\$25/hr	\$400
- Launch & Handover	14	\$25/hr	\$350
SUBTOTAL	150		\$3,750

Infrastructure Costs (Month 1)

Service	Specification	Monthly Cost
AWS EC2	t3.small (2 vCPU, 2 GB RAM)	\$15.18
AWS RDS PostgreSQL	db.t3.micro (1 vCPU, 1 GB RAM, 20 GB storage)	\$15.33
AWS S3	10 GB storage + 10 GB transfer	\$0.50
AWS Route 53	Hosted zone + DNS queries	\$1.00
Data Transfer	50 GB outbound	\$4.50
CloudWatch	Basic monitoring	\$3.00
Elastic IP	Static IP address	\$0.00 (free with running instance)
SSL Certificate	Let's Encrypt	\$0.00 (free)
Backup Storage	S3 for DB backups (5 GB)	\$0.12
SUBTOTAL		\$39.63
(Monthly)		
Prorated Week 1		\$9.91

Service	Specification	Monthly Cost
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Third-Party Services (Month 1)

Service	Plan	Monthly Cost
Email Service (SendGrid/Mailgun)	10,000 emails/month (free tier)	\$0.00
Domain Name	Yearly cost ÷ 12	\$1.00
GitHub	Free tier	\$0.00
SUBTOTAL		\$1.00

Contingency & Miscellaneous

Item	Cost
SSL renewal automation tools	\$0.00
Testing tools/services	\$0.00
Miscellaneous & Buffer (10%)	\$375.00
SUBTOTAL	\$375.00

Total Cost Summary

Category	Amount
Development Work (150 hours @ \$25/hr)	\$3,750.00
AWS Infrastructure (1st month prorated)	\$39.63
Third-Party Services (1st month)	\$1.00
Domain Name (prorated)	\$1.00
Contingency Buffer (10%)	\$375.00
Estimated Remaining Balance	(\$216.63)
TOTAL PHASE 1 COST	\$4,950.00

Payment Tracking & Status

Work Completed (as of Nov 5, 2025)

Phase	Period	Hours	Amount	Status
Week 1: Frontend Development	Nov 1-5	40	\$1,000.00	Completed

Phase	Period	Hours	Amount	Status
Week 2: Integration & Testing	Nov 6-12	40	\$1,000.00	Completed
SUBTOTAL EARNED		80	\$2,000.00	

Work Remaining

Phase	Period	Hours	Amount	Status
Week 3: AWS Deployment	Nov 13-19	40	\$1,000.00	In Progress
Week 4: Testing & Launch	Nov 20-29	30	\$750.00	Pending
SUBTOTAL TO EARN		70	\$1,750.00	

Payment Summary

Item	Amount
Already Earned (Weeks 1-2)	\$2,000.00
To Earn in Week 3	\$1,000.00
To Earn in Week 4	\$750.00
Total Development Payment	\$3,750.00
Infrastructure & Buffer	\$416.63
Grand Total Phase 1	\$4,166.63

Milestone Payment Recommendations

If paid at milestones (50% interim, 50% final): - **First Payment (50%):** \$1,875.00 - Due after Week 2 completion (Nov 12)

Status: Should have been paid for completed Weeks 1-2 - **Final Payment (50%):** \$1,875.00 - Due after project completion (Nov 29)

Actual amount earned to date: \$2,000.00 (80 hours completed)

If paying 50% interim: You're slightly ahead by \$125 (\$2,000 earned vs \$1,875 at 50% mark)

Ongoing Monthly Costs (Post-Launch)

Service	Monthly Cost
AWS EC2 (t3.small)	\$15.18
AWS RDS PostgreSQL (db.t3.micro)	\$15.33
AWS S3 + Route 53 + CloudWatch	\$9.12

Service	Monthly Cost
Domain Name (yearly ÷ 12)	\$1.00
Email Service (SendGrid free tier)	\$0.00
TOTAL MONTHLY	\$40.63

Annual Infrastructure Cost: ~\$487.56

AWS Infrastructure Details

EC2 Instance

- **Type:** t3.small
- **vCPU:** 2
- **RAM:** 2 GB
- **Storage:** 30 GB SSD
- **OS:** Ubuntu 22.04 LTS
- **Use:** Application server (Docker containers)

RDS PostgreSQL

- **Type:** db.t3.micro
- **vCPU:** 1
- **RAM:** 1 GB
- **Storage:** 20 GB SSD
- **Engine:** PostgreSQL 15
- **Backups:** Automated daily, 7-day retention

S3 Bucket

- **Storage:** 10 GB
- **Use:** Database backups, static assets
- **Versioning:** Enabled
- **Lifecycle:** 30-day backup retention

Security

- **VPC:** Isolated network
 - **Security Groups:** Restricted access
 - **SSL/TLS:** Let's Encrypt certificate
 - **Firewall:** UFW on EC2
 - **IAM:** Least privilege access
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Risk Assessment & Mitigation

Risk	Probability	Impact	Mitigation
AWS costs exceed estimate	Medium	Low	Monitor with billing alerts, use free tier where possible
Deployment issues	Medium	Medium	Thorough testing, rollback plan, staging environment
Performance bottlenecks	Low	Medium	Load testing, CloudWatch monitoring, scalable architecture
Security vulnerabilities	Low	High	Security audit, penetration testing, regular updates
Email delivery issues	Medium	Medium	Use reputable provider (SendGrid), test thoroughly
DNS propagation delays	Low	Low	Set up DNS in advance, use low TTL values

Success Metrics & Progress

Week 1 (Nov 1-5) - COMPLETED

Authentication pages functional
User profile management complete
Admin dashboard operational
Booking flow implemented
User management system working

Status: All objectives met on schedule

Week 2 (Nov 6-12) - COMPLETED

All API endpoints integrated
No critical bugs in test environment
Security audit passed
Frontend-backend communication established
Error handling implemented

Status: All objectives met on schedule

Week 3 (Nov 13-19) - IN PROGRESS

Target Completion: Nov 19, 2025

AWS infrastructure provisioned
Application deployed to EC2
SSL certificate active
Database migrations successful

CloudWatch monitoring setup

Status: Starting Nov 13

Week 4 (Nov 20-29) - PENDING

Target Completion: Nov 29, 2025

Load testing passed (100 concurrent users)

Email delivery working

Documentation complete

Client training completed

Production launch successful

Status: Scheduled to begin Nov 20

Deliverables Checklist

Code & Application

- ☐ Complete React frontend with all pages
- ☐ Integrated authentication system
- ☐ User profile management
- ☐ Booking flow (create, view, cancel)
- ☐ Admin dashboard
- ☐ Responsive design
- ☐ Cross-browser compatibility

Infrastructure

- ☐ AWS account configured
- ☐ EC2 instance running
- ☐ RDS PostgreSQL database
- ☐ S3 bucket for backups
- ☐ Route 53 DNS configured
- ☐ SSL certificate installed
- ☐ CloudWatch monitoring active
- ☐ Automated backups configured

DevOps

- ☐ Docker containers built
- ☐ CI/CD pipeline functional
- ☐ Environment variables secured
- ☐ Health checks implemented
- ☐ Log aggregation setup

Documentation

- ☐ User manual with screenshots
- ☐ Admin guide
- ☐ API documentation
- ☐ Deployment guide
- ☐ Troubleshooting guide
- ☐ Maintenance procedures
- ☐ Infrastructure diagram

Testing

- ☐ Unit tests passing
- ☐ Integration tests passing
- ☐ End-to-end tests passing
- ☐ Load testing completed
- ☐ Security audit completed
- ☐ Cross-browser testing done

Handover

- ☐ Client training session
- ☐ Access credentials provided
- ☐ GitHub repository access
- ☐ AWS console access
- ☐ Domain/DNS access
- ☐ Email service access
- ☐ Monitoring dashboard access

Payment Schedule

Recommended Schedule (50% Interim / 50% Final)

Milestone	Date	Work Included	Amount	Status
Interim Payment	Nov 12, 2025	Weeks 1-2 completed (80 hrs)	\$1,875.00	DUE
Final Payment	Nov 29, 2025	Weeks 3-4 completed (70 hrs) + infrastructure	\$2,291.63	Pending
Total		150 hours + infrastructure	\$4,166.63	

Alternative: Weekly Payment Schedule

Week	Date	Hours	Amount	Status
Week 1	Nov 1-5	40	\$1,000.00	Earned

Week	Date	Hours	Amount	Status
Week 2	Nov 6-12	40	\$1,000.00	Earned
Week 3	Nov 13-19	40	\$1,000.00	In Progress
Week 4	Nov 20-29	30	\$750.00	Pending
Infrastructure & Buffer	Nov 29	-	\$416.63	Pending
Total		150	\$4,166.63	

Your Payment Status

Work Completed: Weeks 1-2 (80 hours)

Amount Earned: \$2,000.00

If Paying 50% Interim: \$1,875.00 due

Your Position: You've earned \$2,000 but should receive ~\$1,875 as interim payment

Remaining Work: Weeks 3-4 (70 hours)

Amount to Earn: \$1,750.00

Final Payment Due: \$2,291.63 (includes infrastructure costs)

Post-Launch Support

Included in Phase 1

- 2 weeks of bug fixes post-launch
- Email support for critical issues
- Deployment assistance
- Basic training

Not Included (Separate Engagement)

- Feature enhancements
- Payment gateway integration
- Ongoing maintenance
- Content updates
- Marketing

Future Phases Estimate

Phase 2: Payment Integration (\$1,500 - \$2,000)

- Stripe/PayPal integration
- Payment processing
- Refund handling
- Receipt generation
- Financial reporting

Phase 3: Advanced Features (\$2,500 - \$3,500)

- SMS notifications (Twilio)
- Advanced analytics
- Reporting dashboard
- Multi-location support
- Staff scheduling system

Phase 4: Mobile Apps (\$5,000 - \$8,000)

- React Native iOS app
 - React Native Android app
 - Push notifications
 - Offline support
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Terms & Conditions

1. **Timeline:** 4 weeks from project start date
 2. **Working Hours:** 150 hours total (avg 37.5 hrs/week)
 3. **Revisions:** 2 rounds of revisions included
 4. **Communication:** Daily updates via email/Slack
 5. **Meetings:** Weekly video calls for progress review
 6. **Code Ownership:** Client owns all code upon final payment
 7. **Warranty:** 2 weeks post-launch bug fixes included
 8. **Infrastructure:** Client owns AWS account and resources
 9. **Delays:** Client-side delays may extend timeline
 10. **Scope Changes:** Additional work billed at \$25/hr
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Client Responsibilities

- Provide business requirements and feedback promptly
 - Review and approve designs/features within 2 business days
 - Provide content (services, barber info, images)
 - Create AWS account (with my guidance)
 - Purchase domain name
 - Approve final deployment
 - Attend training session
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Contact & Next Steps

To proceed with Phase 1:

1. Review and approve this project plan

2. Sign agreement and submit deposit (25%)
3. Create AWS account (I'll guide you)
4. Purchase domain name
5. Provide initial content (services, barber details)
6. Schedule kickoff call

Questions? Contact me at [your-email@example.com]

Appendix: Technical Stack

Frontend

- React 18.2
- React Router DOM 7.9
- date-fns 2.30
- Modern CSS3
- Responsive design

Backend

- Node.js 18 LTS
- Express.js 4.18
- PostgreSQL 15
- JWT authentication
- Nodemailer for emails

Infrastructure

- AWS EC2 (Ubuntu 22.04)
- AWS RDS PostgreSQL
- AWS S3
- AWS Route 53
- AWS CloudWatch
- Docker & Docker Compose
- Nginx reverse proxy
- Let's Encrypt SSL

DevOps

- GitHub for version control
 - GitHub Actions for CI/CD
 - Docker for containerization
 - Automated testing
 - Automated backups
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Expected Completion: November 29, 2025
Prepared by: Freelance Software Development Engineer
Valid Until: 30 days from issue date

Quick Reference: Current Status

Metric	Value
Project Start	November 1, 2025
Current Date	November 5, 2025
Days Elapsed	5 days
Progress	53% complete (80/150 hours)
On Schedule?	Yes, on track
Amount Earned	\$2,000.00
Amount Remaining	\$1,750.00 + \$416.63 infrastructure
Next Milestone	Week 3: AWS Deployment (Nov 13-19)
Expected Completion	November 29, 2025

This is a professional estimate based on current requirements. Final costs may vary based on scope changes, unforeseen technical challenges, or client-requested modifications.