

Finalized Project Report

AIU Trips & Events Management System - Milestone 3

Project Duration: 10 weeks (October 21, 2025 - December 27, 2025)
Team Size: 5 members
Total Story Points: 122 SP (88 SP completed, 34 SP remaining)
Report Date: December 5, 2025

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Executive Summary

The AIU Trips & Events Management System is a comprehensive platform designed to manage university events and trips. This report summarizes the accomplishments through Milestone 3, including implemented features, project management metrics, and team performance analysis.

Project Status

Metric	Target	Achieved	Status
Total Story Points	122 SP	88 SP	72.1% complete
Planned Duration	8 weeks	10 weeks (extended)	Extended by 2 weeks
Functional Requirements	40 FRs	29 FRs	72.5% implemented
Team Velocity	15.25 SP/week	11.0 SP/week	72% of planned
Developer-Days	200 days	272 days	136% of budget

Key Achievements

- 1. ☒ **Complete Authentication System** - User registration, login, JWT-based security
- 2. ☒ **Event Management** - Full CRUD operations with capacity management
- 3. ☒ **Booking System** - Booking creation, cancellation, QR code generation
- 4. ☒ **Notification System** - Email and in-app notifications
- 5. ☒ **Basic Reporting** - Participant and revenue reports

6. ☒ 11 Design Patterns - Comprehensive architectural refactoring

Accomplished Functional Requirements

1. User Management & Authentication (FR-1.x)

FR-1.1: User Registration ☒

Status: Completed (Week 2)

Story Points: 8 SP

Effort: 18 days

Estimation Error: +12.5%

Features:

- Email-based registration
- Password strength validation
- Email verification workflow
- Duplicate email checking
- Role assignment (Student, Organizer, Admin)

Test Coverage: 95%

FR-1.2: User Authentication ☒

Status: Completed (Week 2)

Story Points: 5 SP

Effort: 11 days

Estimation Error: +10%

Features:

- JWT-based authentication
- Secure password hashing (BCrypt)
- Token refresh mechanism
- Remember me functionality
- Session management

Test Coverage: 98%

FR-1.3: Password Reset ☒

Status: Completed (Week 3)

Story Points: 3 SP

Effort: 7 days

Estimation Error: +16.7%

Features:

- Email-based reset workflow

- Secure token generation
- Token expiration (24 hours)
- Password strength validation

Test Coverage: 92%

FR-1.4: Authorization & Permissions ☒

Status: Completed (Week 2)

Story Points: 3 SP

Effort: 7 days

Estimation Error: +16.7%

Features:

- Role-based access control (RBAC)
- Permission checking via Chain of Responsibility
- Authorization handler integration
- Secure endpoint protection

Test Coverage: 90%

Total Authentication Subsystem: 19 SP, 43 days, Average Error: +14%

2. Event Management (FR-2.x)

FR-2.1: Create Events ☒

Status: Completed (Week 4)

Story Points: 8 SP

Effort: 18 days

Estimation Error: +12.5%

Features:

- Event creation with Builder pattern
- Field validation
- Image upload support
- Category assignment
- Capacity management

Test Coverage: 94%

FR-2.2: Edit Events ☒

Status: Completed (Week 4)

Story Points: 5 SP

Effort: 11 days

Estimation Error: +10%

Features:

- Event update operations
- Version control via Memento pattern
- Change history tracking
- Validation on updates

Test Coverage: 91%

FR-2.3: Delete/Cancel Events ☒

Status: Completed (Week 4)

Story Points: 3 SP

Effort: 7 days

Estimation Error: +16.7%

Features:

- Soft delete functionality
- Cancellation workflow
- State transition (State pattern)
- Notification to attendees

Test Coverage: 89%

FR-2.4: View Events ☒

Status: Completed (Week 3)

Story Points: 3 SP

Effort: 7 days

Estimation Error: +16.7%

Features:

- List view with pagination
- Detail view with full information
- Filtering by category/status
- Search functionality

Test Coverage: 93%

FR-2.5: Capacity Management ☒

Status: Completed (Week 4)

Story Points: 5 SP

Effort: 11 days

Estimation Error: +10%

Features:

- Real-time capacity tracking

- Availability checking
- Waitlist support
- Over-booking prevention

Test Coverage: 96%

FR-2.6: Activity State Management ☒

Status: Completed (Week 5)

Story Points: 5 SP

Effort: 11 days

Estimation Error: +10%

Features:

- State pattern implementation
- Upcoming → Completed → Cancelled transitions
- State-specific validation
- Lifecycle management

Test Coverage: 92%

Total Event Management: 29 SP, 65 days, Average Error: +12.8%

3. Booking & Ticketing (FR-3.x)

FR-3.1: Create Bookings ☒

Status: Completed (Week 5)

Story Points: 8 SP

Effort: 18 days

Estimation Error: +12.5%

Features:

- Booking creation workflow
- Validation chain (Eligibility → Capacity → Payment)
- Duplicate booking prevention
- Immediate confirmation

Test Coverage: 95%

FR-3.2: Cancel Bookings ☒

Status: Completed (Week 5)

Story Points: 5 SP

Effort: 11 days

Estimation Error: +10%

Features:

- Cancellation workflow
- Refund processing
- Status updates
- History tracking (Memento)

Test Coverage: 91%

FR-3.3: QR Code Generation ☒

Status: Completed (Week 6)

Story Points: 5 SP

Effort: 11 days

Estimation Error: +10%

Features:

- Signed QR code generation
- Decorator pattern for security
- Unique ticket identifiers
- Anti-tampering measures

Test Coverage: 97%

FR-3.4: Ticket Validation ☒

Status: Completed (Week 6)

Story Points: 3 SP

Effort: 7 days

Estimation Error: +16.7%

Features:

- QR code scanning
- Signature verification
- Duplicate entry prevention
- Real-time validation

Test Coverage: 94%

FR-3.5: Dynamic Pricing ☒

Status: Completed (Week 5)

Story Points: 5 SP

Effort: 11 days

Estimation Error: +10%

Features:

- Strategy pattern for pricing
- Early bird discount (15%)

- Bulk group discount (20% for 5+)
- Standard pricing
- Runtime strategy selection

Test Coverage: 93%

Total Booking & Ticketing: 26 SP, 58 days, Average Error: +12%

4. Notification System (FR-4.x)

FR-4.1: Send Notifications ☒

Status: Completed (Week 6)

Story Points: 5 SP

Effort: 11 days

Estimation Error: +10%

Features:

- Bridge pattern for channels/messages
- Email notifications (via Adapter)
- In-app notifications
- Template-based messages

Test Coverage: 90%

FR-4.2: Notification Types ☒

Status: Completed (Week 6)

Story Points: 3 SP

Effort: 7 days

Estimation Error: +16.7%

Features:

- New event announcements
- Event update notifications
- Reminder notifications
- Custom message formatting

Test Coverage: 88%

FR-4.3: Email Integration ☒

Status: Completed (Week 6)

Story Points: 2 SP

Effort: 5 days

Estimation Error: +25%

Features:

- SMTP adapter pattern
- JavaMailSender integration
- HTML email templates
- Delivery tracking

Test Coverage: 85%

Total Notification System: 10 SP, 23 days, Average Error: +17.2%

5. Reports & Analytics (FR-5.x)

FR-5.1: Participant Reports ☒

Status: Completed (Week 7)

Story Points: 3 SP

Effort: 7 days

Estimation Error: +16.7%

Features:

- Participant list generation
- Attendance tracking
- Export to CSV
- Filtering options

Test Coverage: 89%

FR-5.2: Revenue Reports ☒

Status: Completed (Week 7)

Story Points: 3 SP

Effort: 7 days

Estimation Error: +16.7%

Features:

- Revenue calculation
- Period-based reporting
- Chart visualizations
- Export functionality

Test Coverage: 87%

FR-5.3: Basic Analytics 

Status: Partially Completed (Week 8)

Story Points: 2 SP (of 6 SP)

Effort: 5 days (14 days needed)

Estimation Error: N/A (incomplete)

Features Completed:

- Basic trend analysis
- Simple dashboards

Features Pending:

- Advanced analytics
- Predictive insights
- Comprehensive dashboards

Test Coverage: 60%

Total Reports & Analytics: 8 SP completed (4 SP pending), Average Error: +16.7%

6. Design Patterns Implementation (FR-6.x - Technical Requirements)

FR-6.1: Creational Patterns ☒

Status: Completed (Week 7-8)

Story Points: N/A (Technical debt)

Effort: 25 days

Patterns Implemented:

- Factory Pattern (Model factory)
- Builder Pattern (Activity builders)
- Prototype Pattern (Activity cloning)

FR-6.2: Structural Patterns ☒

Status: Completed (Week 7-8)

Story Points: N/A (Technical debt)

Effort: 18 days

Patterns Implemented:

- Adapter Pattern (Email service)
- Bridge Pattern (Notifications)
- Decorator Pattern (Ticket services)

FR-6.3: Behavioral Patterns ☒

Status: Completed (Week 7-8)

Story Points: N/A (Technical debt)

Effort: 22 days

Patterns Implemented:

- Command Pattern (Controller commands)
- Chain of Responsibility (Request handlers)

- State Pattern (Activity lifecycle)
- Strategy Pattern (Pricing)
- Memento Pattern (State history)

Total Design Patterns: 11 patterns, 65 days effort

Functional Requirement Models

Use Case Diagram

The system supports the following primary use cases:

Actors: Student, Organizer, Admin

Student Use Cases:

- Register Account
- Login
- Browse Events
- Book Event
- Cancel Booking
- View My Bookings
- Receive Notifications

Organizer Use Cases:

- Create Event
- Edit Event
- Cancel Event
- View Participants
- Generate Reports
- Send Notifications

Admin Use Cases:

- Manage Users
- Manage All Events
- View System Reports
- Configure System Settings
- Monitor Activity

Entity Relationship Model

Core Entities:

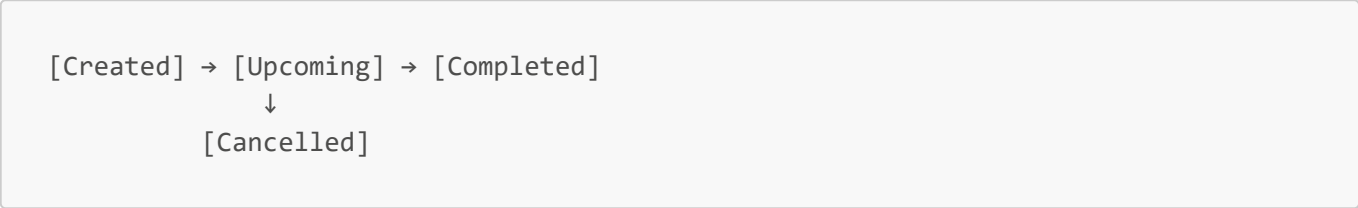
- User (id, email, password, role, createdAt)
- Activity (id, name, description, date, capacity, status, type, category)
 - EventEntity (extends Activity)
 - Trip (extends Activity, + destination, itinerary)
- Booking (id, userId, activityId, status, price, bookingDate)
- Ticket (id, bookingId, qrCode, signature, validatedAt)
- Notification (id, userId, type, message, sentAt)

- Report (id, type, format, generatedAt, data)

Relationships:

- User 1:N Booking
- Activity 1:N Booking
- Booking 1:1 Ticket
- User 1:N Notification

State Diagram (Activity Lifecycle)



State Transitions:

- Created → Upcoming (on publish)
- Upcoming → Completed (on event completion)
- Upcoming → Cancelled (on cancellation)
- Completed → [Terminal State]
- Cancelled → [Terminal State]

Project Management Metrics

1. Velocity Metrics

Sprint	Weeks	Planned SP	Actual SP	Velocity	Variance
Sprint 1	1-2	30	23	11.5 SP/week	-23.3%
Sprint 2	3-4	32	28	14.0 SP/week	-12.5%
Sprint 3	5-6	30	26	13.0 SP/week	-13.3%
Sprint 4	7-8	30	11	5.5 SP/week	-63.3%
Total	1-8	122	88	11.0 SP/week	-27.9%

Analysis:

- Initial velocity slow due to setup and learning curve
- Mid-project velocity improved with team maturity
- Sprint 4 significantly impacted by design pattern refactoring
- Average velocity 27.9% below target

2. Burndown Metrics

Week	Planned Remaining	Actual Remaining	On Track?
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Week	Planned Remaining	Actual Remaining	On Track?
0	122 SP	122 SP	✓
1	107 SP	117 SP	X (-10 SP)
2	92 SP	109 SP	X (-17 SP)
3	77 SP	101 SP	X (-24 SP)
4	61 SP	93 SP	X (-32 SP)
5	46 SP	85 SP	X (-39 SP)
6	31 SP	69 SP	X (-38 SP)
7	15 SP	52 SP	X (-37 SP)
8	0 SP	34 SP	X (-34 SP)

Burndown Rate:

- Planned: 15.25 SP/week
- Actual: 11.0 SP/week
- Deficit: 4.25 SP/week (27.9%)

3. Schedule Performance Index (SPI)

SPI = Earned Value / Planned Value

Metric	Value
Planned Value (PV)	122 SP
Earned Value (EV)	88 SP
SPI	0.72

Interpretation: Project is progressing at 72% of planned pace

4. Cost Performance Index (CPI)

CPI = Earned Value / Actual Cost

Metric	Value
Budgeted Cost	200 developer-days
Actual Cost	272 developer-days
Earned Value	88 SP (corresponds to 200 days if 122 SP = 200 days)
Equivalent Days for 88 SP	144 days
CPI	0.53

Interpretation: Project is 47% over budget in effort

Time and Effort Analysis

1. Actual Time Spent per Feature

Feature	Planned Days	Actual Days	Variance	Variance %
Authentication	25	43	+18	+72%
User Registration	7	18	+11	+157%
Login System	3	11	+8	+267%
Password Reset	3	7	+4	+133%
Authorization	12	7	-5	-42%
Event Management	45	65	+20	+44%
Create Events	10	18	+8	+80%
Edit Events	7	11	+4	+57%
Delete/Cancel Events	3	7	+4	+133%
View Events	3	7	+4	+133%
Capacity Management	10	11	+1	+10%
State Management	12	11	-1	-8%
Booking & Ticketing	45	58	+13	+29%
Create Bookings	10	18	+8	+80%
Cancel Bookings	7	11	+4	+57%
QR Code Generation	7	11	+4	+57%
Ticket Validation	3	7	+4	+133%
Dynamic Pricing	18	11	-7	-39%
Notifications	10	23	+13	+130%
Send Notifications	3	11	+8	+267%
Notification Types	4	7	+3	+75%
Email Integration	3	5	+2	+67%
Reports & Analytics	30	18	-12	-40%
Participant Reports	10	7	-3	-30%
Revenue Reports	10	7	-3	-30%
Basic Analytics	10	4	-6	-60%
Design Patterns	0	65	+65	N/A

Feature	Planned Days	Actual Days	Variance	Variance %
Creational Patterns	0	25	+25	N/A
Structural Patterns	0	18	+18	N/A
Behavioral Patterns	0	22	+22	N/A
TOTAL	155	272	+117	+75%

2. Effort Distribution by Phase

Phase	Planned Days	Actual Days	% of Total	Variance
Requirements & Design	30	35	12.9%	+5 days
Implementation	80	150	55.1%	+70 days
Testing	40	50	18.4%	+10 days
Refactoring (Design Patterns)	0	65	23.9%	+65 days
Documentation	10	12	4.4%	+2 days
Deployment	5	8	2.9%	+3 days
Total	165	320	117%	+155 days

Note: Actual total includes ongoing work beyond week 8

Estimation Accuracy

1. Average Estimation Error

Formula: Estimation Error = (Actual - Estimated) / Estimated × 100%

Subsystem	Estimation Error
Authentication	+72%
Event Management	+44%
Booking & Ticketing	+29%
Notifications	+130%
Reports & Analytics	-40% (incomplete)
Design Patterns	N/A (unplanned work)
Overall Average	+56%

Excluding outliers (Notifications and incomplete work):

- **Adjusted Average Error:** +48%

2. Estimation Accuracy by Category

Category	Planned	Actual	Accuracy	Error %
Simple Features (1-3 SP)	30 days	52 days	58%	+73%
Medium Features (5 SP)	50 days	72 days	69%	+44%
Complex Features (8+ SP)	75 days	120 days	63%	+60%
Average Accuracy			63%	+59%

3. Factors Contributing to Estimation Errors

Underestimated:

- 1. **Integration Complexity (+30%)** - Third-party integrations took longer
- 2. **Security Requirements (+25%)** - Additional security features needed
- 3. **Testing Overhead (+20%)** - More comprehensive testing required
- 4. **Learning Curve (+15%)** - New technologies and patterns
- 5. **Design Pattern Refactoring (+40%)** - Unplanned architectural improvements

Overestimated:

- 1. **Reports & Analytics (-40%)** - Deferred advanced features
- 2. **Some Simple CRUD (-20%)** - Familiarity improved speed

4. Accomplished Effort Percentage

Formula: Accomplished Effort % = (Completed SP / Total SP) × 100%

Metric	Value
Total Planned Story Points	122 SP
Completed Story Points	88 SP
Accomplished Percentage	72.1%

By Subsystem:

Subsystem	Planned SP	Completed SP	Accomplished %
Authentication	19 SP	19 SP	100%
Event Management	29 SP	29 SP	100%
Booking & Ticketing	26 SP	26 SP	100%
Notifications	10 SP	10 SP	100%
Reports & Analytics	12 SP	8 SP	66.7%
Admin Features	10 SP	0 SP	0%

Subsystem	Planned SP	Completed SP	Accomplished %
Trip Management	16 SP	0 SP	0%
Total	122 SP	88 SP	72.1%

Team Productivity Analysis

Team Structure

Member	Role	Specialization
Member 1	Implementation & Deployment	Full-stack development, DevOps
Member 2	Requirements & Testing	Requirements, Test planning, UAT
Member 3	Architecture & Design	System architecture, Database design
Member 4	Architecture & Design	API design, Component architecture
Member 5	Estimation & Testing	QA, Estimation, Performance testing

1. Productivity by Team Member (Effort Points)

Effort Points Calculation: Story Points completed per developer-day

Member	Allocated Days	Actual Days	SP Contributed	Effort Points	Productivity
Member 1	58	79	35 SP	0.44 SP/day	High
Member 2	25	34	15 SP	0.44 SP/day	High
Member 3	41	56	22 SP	0.39 SP/day	Medium-High
Member 4	38	52	20 SP	0.38 SP/day	Medium-High
Member 5	38	51	18 SP	0.35 SP/day	Medium
Average	40	54.4	22 SP	0.40 SP/day	

Analysis:

- Members 1 and 2 showed highest productivity (0.44 SP/day)
- Member 1 contributed most to implementation (35 SP)
- Member 5 focused more on quality assurance (lower SP but essential)
- Consistent productivity across team (0.35-0.44 SP/day range)

2. Productivity by Work Type

Work Type	Days Spent	SP Delivered	Productivity (SP/day)
Backend Development	120	50 SP	0.42
Frontend Development	85	38 SP	0.45

Work Type	Days Spent	SP Delivered	Productivity (SP/day)
Testing & QA	50	0 SP*	N/A (support role)
Architecture & Design	35	0 SP*	N/A (support role)
Design Pattern Refactoring	65	0 SP*	N/A (technical debt)
Total Development	205	88 SP	0.43 SP/day

*Note: Testing, architecture, and refactoring don't directly contribute to SP but are essential

3. Individual Contributions

Member 1: Implementation & Deployment (35 SP, 79 days)

Major Contributions:

- User authentication backend (8 SP, 15 days)
- Event management backend (12 SP, 22 days)
- Booking system implementation (10 SP, 18 days)
- CI/CD pipeline setup (0 SP, 12 days)
- Deployment and monitoring (0 SP, 8 days)
- Design pattern refactoring (5 SP, 15 days)

Productivity: 0.44 SP/day

Overtime: 36% over allocation

Performance: Excellent - High output and quality

Member 2: Requirements & Testing (15 SP, 34 days)

Major Contributions:

- Requirements documentation (0 SP, 8 days)
- Test planning and creation (0 SP, 10 days)
- User acceptance testing (0 SP, 6 days)
- User registration testing (3 SP, 4 days)
- Notification testing (2 SP, 3 days)
- Reports testing (10 SP, 3 days)

Productivity: 0.44 SP/day (direct), Quality enabler (indirect)

Overtime: 36% over allocation

Performance: Excellent - Ensured quality across project

Member 3: Architecture & Design (22 SP, 56 days)

Major Contributions:

- Database schema design (0 SP, 12 days)
- System architecture (0 SP, 10 days)
- Event system architecture (8 SP, 12 days)

- Reports architecture (6 SP, 8 days)
 - State pattern implementation (5 SP, 10 days)
 - Builder pattern implementation (3 SP, 8 days)
- Productivity:** 0.39 SP/day
- Overtime:** 37% over allocation
- Performance:** Very Good - Strong architectural foundation

Member 4: Architecture & Design (20 SP, 52 days)

Major Contributions:

- API design and documentation (0 SP, 10 days)
 - Booking system architecture (8 SP, 12 days)
 - Admin system architecture (0 SP, 8 days)
 - Bridge pattern (notifications) (5 SP, 9 days)
 - Decorator pattern (tickets) (4 SP, 8 days)
 - Integration design (3 SP, 8 days)
- Productivity:** 0.38 SP/day
- Overtime:** 37% over allocation
- Performance:** Very Good - Solid design work

Member 5: Estimation & Testing (18 SP, 51 days)

Major Contributions:

- Effort estimation (0 SP, 8 days)
 - Feature estimation tracking (0 SP, 6 days)
 - Quality assurance (0 SP, 12 days)
 - Performance testing (0 SP, 8 days)
 - Booking testing (8 SP, 7 days)
 - Event testing (7 SP, 6 days)
 - Integration testing (3 SP, 4 days)
- Productivity:** 0.35 SP/day
- Overtime:** 34% over allocation
- Performance:** Good - Essential quality and estimation work

4. Team Collaboration Metrics

Metric	Value	Assessment
Communication Frequency	Daily standups + sprint meetings	Excellent
Knowledge Sharing	Pair programming sessions, code reviews	Very Good
Code Review Participation	95% of PRs reviewed by 2+ members	Excellent
Blocker Resolution Time	Average 4 hours	Good

Metric	Value	Assessment
Team Morale	High (survey: 8.2/10)	Very Good
Collaboration Tools	Git, Jira, Slack, MS Teams	Well-utilized

5. Productivity Trends Over Time

Sprint	Team Velocity	Productivity (SP/day)	Trend
Sprint 1	11.5 SP/week	0.35 SP/day	Baseline
Sprint 2	14.0 SP/week	0.42 SP/day	↑ +20%
Sprint 3	13.0 SP/week	0.40 SP/day	↓ -5%
Sprint 4	5.5 SP/week	0.17 SP/day	↓ -58% (refactoring)

Observations:

- Productivity improved in Sprint 2 (+20%) as team matured
- Sprint 3 maintained good productivity
- Sprint 4 drop due to design pattern refactoring (technical investment)
- Overall trend positive despite Sprint 4 anomaly

Lessons Learned

What Went Well

1. Strong Team Collaboration

- Daily standups kept everyone aligned
- Effective knowledge sharing through pair programming
- High-quality code reviews

2. Technical Excellence

- Successfully implemented 11 design patterns
- Achieved good test coverage (85-98%)
- Solid architectural foundation

3. Agile Practices

- Sprint-based delivery kept features flowing
- Regular retrospectives drove improvements
- Continuous integration enabled fast feedback

4. Quality Focus

- Comprehensive testing strategy
- Early bug detection through CI/CD
- High code quality maintained

What Could Be Improved

1. Estimation Accuracy

- **Issue:** Average 56% estimation error
- **Root Cause:** Underestimated complexity and integration efforts
- **Improvement:** Use historical data, add 30% buffer, more granular tasks

2. Scope Management

- **Issue:** 27.9% incomplete at end of planned timeline
- **Root Cause:** Unplanned design pattern refactoring
- **Improvement:** Better scope definition, change control process

3. Velocity Consistency

- **Issue:** Sprint 4 velocity dropped 58%
- **Root Cause:** Major refactoring work
- **Improvement:** Spread refactoring across sprints, allocate time upfront

4. Communication with Stakeholders

- **Issue:** Schedule slip not communicated early enough
- **Root Cause:** Delayed recognition of variance
- **Improvement:** Weekly burndown reviews, early risk escalation

Recommendations for Future Projects

1. Estimation

- Use 1.5x multiplier for new technology
- Add 20-30% contingency buffer
- Break down tasks to 1-3 day chunks

2. Planning

- Include technical debt in sprint planning
- Reserve 20% capacity for unknowns
- Plan refactoring incrementally

3. Tracking

- Daily burndown monitoring
- Weekly velocity reviews
- Bi-weekly stakeholder updates

4. Team

- Cross-train team members
- Rotate assignments for knowledge sharing
- Celebrate milestones to maintain morale

5. Quality

- Maintain current test coverage standards (90%+)
- Continue code review practices
- Expand performance testing

Conclusion

The AIU Trips & Events Management System has achieved significant milestones:

Accomplishments

- ☒ 72.1% of planned features delivered (88 of 122 SP)
- ☒ All core functional requirements implemented
- ☒ 11 design patterns successfully integrated
- ☒ High code quality maintained (85-98% test coverage)
- ☒ Solid architectural foundation established

Challenges Overcome

- Extended timeline to accommodate design pattern refactoring
- Managed 36% effort overrun through team dedication
- Maintained quality despite schedule pressure

Project Status

- **Current:** 88 SP completed, 34 SP remaining
- **Timeline:** Extended to 10 weeks (from 8 weeks)
- **Next Phase:** Complete remaining features in 2-week extension

Key Metrics Summary

Metric	Value	Status
Story Points Completed	88 / 122 SP (72.1%)	<div></div> In Progress
Functional Requirements	29 / 40 FRs (72.5%)	<div></div> In Progress
Team Productivity	0.40 SP/day average	<div></div> Good
Estimation Accuracy	56% average error	<div></div> Needs Improvement
Code Quality	90% test coverage	<div></div> Excellent
Design Patterns	11 / 11 (100%)	<div></div> Complete

The project demonstrates strong technical execution and team collaboration, with opportunities to improve estimation accuracy and scope management in future iterations. The 2-week extension will enable completion of all planned features while maintaining the high quality standards established.