

POLITECNICO DI MILANO

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Software Engineering 2: PowerEnJoy

Integration Test Plan Document

Version 1.0

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**TABLE OF CONTENT**

|  |  |
| --- | --- |
| 1. INTRODUCTION  1.1 REVISION HISTORY  1.2 PUROPSE AND SCOPE  1.3 DEFINITIONS AND ABBREVIATIONS  1.4 REFERENCE DOCUMENTS  2. INTEGRATION STRATEGY  2.1 ENTRY CRITERIA  2.2 ELEMENTS TO INTEGRATE  2.3 INTEGRATN TESTING STRATEGY  2.4 COMPONENT-FUNCTION INTEGRATION  2.4.1 SOFTWARE INTEGRATION SEQUENCE  2.4.2 SUBSYSTEM INTEGRATION SEQUENCE  3. INDIVIDUAL TESTS AND STEPS DESCRIPTION  4. TOOLS AND TEST EQUIPMENT REQUIRED  5. PROGRAM STUBS AND TEST DATA REQUIRED  6. EFFORT SPENT |  |

**1. INTRODUCTION**

***1.1 REVISION HISTORY***

***1.2 PUROPSE AND SCOPE***

***1.3 DEFINITIONS AND ABBREVIATIONS***

***1.4 REFERENCE DOCUMENTS***

**2. INTEGRATION STRATEGY**

***2.1 ENTRY CRITERIA***

***2.2 ELEMENTS TO INTEGRATE***

***2.3 INTEGRATN TESTING STRATEGY***

***2.4 COMPONENT-FUNCTION INTEGRATION***

***2.4.1 SOFTWARE INTEGRATION SEQUENCE***

***2.4.2 SUBSYSTEM INTEGRATION SEQUENCE***

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| ***Test Case ID*** | IT\* |
| ***Test Item*** | \*\*\* 🡪 \*\*\* |
| ***Input Specification*** | Simulate *\*\*\**  component typical input coming from *\*\*\**. |
| ***Output Specification*** | Check if the correct *\*\*\** methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *\*\*\** must have been already implemented. |

**3. INDIVIDUAL TESTS AND STEPS DESCRIPTION**

***3.1. Persistency Unit integration test***

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| ***Test Case ID*** | IT1 |
| ***Test Item*** | Retrieval Request Model 🡪 Persistency Unit |
| ***Input Specification*** | Simulate *Persistency Unit* component typical input coming from *Retrieval Request Model*. |
| ***Output Specification*** | Check if the correct *Persistency Unit* methods are invoked with respect to the input parameter values. |
| ***Environmental Needs*** | *Persistency Unit* must have been already implemented |

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| ***Test Case ID*** | IT2 |
| ***Test Item*** | Car State Model 🡪 Persistency Unit |
| ***Input Specification*** | Simulate *Persistency Unit* component typical input coming from *Car State Model*. |
| ***Output Specification*** | Check if the correct *Persistency Unit* methods are invoked with respect to the input parameter values. |
| ***Environmental Needs*** | *Persistency Unit* must have been already implemented |

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| ***Test Case ID*** | IT3 |
| ***Test Item*** | Reservation Model 🡪 Persistency Unit |
| ***Input Specification*** | Simulate *Persistency Unit* component typical input coming from *Reservation Model*. |
| ***Output Specification*** | Check if the correct *Persistency Unit* methods are invoked with respect to the input parameter values. |
| ***Environmental Needs*** | *Persistency Unit* must have been already implemented |

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| ***Test Case ID*** | IT4 |
| ***Test Item*** | Charges History Model 🡪 Persistency Unit |
| ***Input Specification*** | Simulate *Persistency Unit* component typical input coming from *Charges History Model*. |
| ***Output Specification*** | Check if the correct *Persistency Unit* methods are invoked with respect to the input parameter values. |
| ***Environmental Needs*** | *Persistency Unit* must have been already implemented |

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| ***Test Case ID*** | IT5 |
| ***Test Item*** | User Model 🡪 Persistency Unit |
| ***Input Specification*** | Simulate *Persistency Unit* component typical input coming from *User Model*. |
| ***Output Specification*** | Check if the correct *Persistency Unit* methods are invoked with respect to the input parameter values. |
| ***Environmental Needs*** | *Persistency Unit* must have been already implemented |

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| ***Test Case ID*** | IT6 |
| ***Test Item*** | Website Model 🡪 Persistency Unit |
| ***Input Specification*** | Simulate *Persistency Unit* component typical input coming from *Website Model*. |
| ***Output Specification*** | Check if the correct *Persistency Unit* methods are invoked with respect to the input parameter values. |
| ***Environmental Needs*** | *Persistency Unit* must have been already implemented |

***3.2. Model-Controller system integration test***

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| ***Test Case ID*** | IT7 |
| ***Test Item*** | Website Controller 🡪 Website Model |
| ***Input Specification*** | Simulate *Website Model* component typical input coming from *Website Controller.* |
| ***Output Specification*** | Check if the correct methods are invoked in the *Website Controller* with respect to the input parameter values. |
| ***Environmental Needs*** | *Website Controller* must have been already implemented. |

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| ***Test Case ID*** | IT8 |
| ***Test Item*** | Car Retrieval Controller 🡪 Car Retrieval Model |
| ***Input Specification*** | Simulate *Car Retrieval Model* component typical input coming from *Car Retrieval Controller.* |
| ***Output Specification*** | Check if the correct Car *Retrieval Model* methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *Car Retrieval Model* must have been already implemented. |

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| ***Test Case ID*** | IT9 |
| ***Test Item*** | Car State Controller 🡪 Car State Model |
| ***Input Specification*** | Simulate *Car State Model*  component typical input coming from *Car State Controller* |
| ***Output Specification*** | Check if the correct *Car State Model* methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *Car State Model* must have been already implemented. |

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| ***Test Case ID*** | IT10 |
| ***Test Item*** | Reservation Controller 🡪 Reservation Model |
| ***Input Specification*** | Simulate *Reservation Model*  component typical input coming from *Reservation Controller.* |
| ***Output Specification*** | Check if the correct Re*servation Model* methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *Reservation Model* must have been already implemented. |

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| ***Test Case ID*** | IT11 |
| ***Test Item*** | User Registration Controller 🡪 User Model |
| ***Input Specification*** | Simulate *User Registration Model*  component typical input coming from *User Registration Controller.* |
| ***Output Specification*** | Check if the correct *User Registration Model* methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *User Registration Model* must have been already implemented. |

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| ***Test Case ID*** | IT12 |
| ***Test Item*** | User Registration Controller 🡪 External Payment Stub |
| ***Input Specification*** | Simulate *External Payment Stub*  component typical input coming from *User Registration Controller.* |
| ***Output Specification*** | Check if the correct *External Payment Stub* methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *External Payment Stub* must have been already implemented. |

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| ***Test Case ID*** | IT13 |
| ***Test Item*** | Charges Controller 🡪 External Payment Stub |
| ***Input Specification*** | Simulate *External Payment Stub* component typical input coming from *Charges Controller.* |
| ***Output Specification*** | Check if the correct *External Payment Stub* methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *External Payment Stub* must have been already implemented. |

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| ***Test Case ID*** | IT14 |
| ***Test Item*** | Charges Controller 🡪 Charges History Model |
| ***Input Specification*** | Simulate *Charges History Model*  component typical input coming from *Charges Controller.* |
| ***Output Specification*** | Check if the correct *Charges History Model* methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *Charges History Model* must have been already implemented. |

***3.3. Model-Controller system integration test***

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| ***Test Case ID*** | IT15-1 |
| ***Test Item*** | Website Controller 🡪 Dispatcher Stub |
| ***Input Specification*** | Simulate *Dispatcher Stub* component typical input coming from *Website Controller* |
| ***Output Specification*** | Check if the correct *Dispatcher Stub* methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *Dispatcher Stub* must have been already implemented. |

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| ***Test Case ID*** | IT15-2 |
| ***Test Item*** | Dispatcher Driver 🡪 Website Controller |
| ***Input Specification*** | Simulate *Website Controller* component typical input coming from *Dispatcher Driver* |
| ***Output Specification*** | Check if the correct *Website Controller* methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *Website Controller* must have been already implemented. |

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| ***Test Case ID*** | IT16-1 |
| ***Test Item*** | Car Retrieval Controller 🡪 Dispatcher Stub |
| ***Input Specification*** | Simulate *Dispatcher Stub*  component typical input coming from *Car Retrieval Controller.* |
| ***Output Specification*** | Check if the correct *Dispatcher Stub*  methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *Dispatcher Stub*  must have been already implemented. |

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| ***Test Case ID*** | IT16-2 |
| ***Test Item*** | Dispatcher Driver 🡪 Car Retrieval Controller |
| ***Input Specification*** | Simulate *Car Retrieval Controller*  component typical input coming from *Dispatcher Driver* |
| ***Output Specification*** | Check if the correct *Car Retrieval Controller* methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *Car Retrieval Controller* must have been already implemented. |

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| ***Test Case ID*** | IT17-1 |
| ***Test Item*** | Car State Controller 🡪 Dispatcher Stub |
| ***Input Specification*** | Simulate *Dispatcher Stub*  component typical input coming from *Car State Controller* |
| ***Output Specification*** | Check if the correct *Dispatcher Stub*  methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *Dispatcher Stub*  must have been already implemented. |

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| ***Test Case ID*** | IT17-2 |
| ***Test Item*** | Dispatcher Driver 🡪 Car State Controller |
| ***Input Specification*** | Simulate *Car State Controller* component typical input coming from *Dispatcher Driver* |
| ***Output Specification*** | Check if the correct *Car State Controller* methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *Car State Controller* must have been already implemented. |

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| ***Test Case ID*** | IT18-1 |
| ***Test Item*** | Reservation Controller 🡪 Dispatcher Stub |
| ***Input Specification*** | Simulate *Dispatcher Stub*  component typical input coming from *Reservation Controller* |
| ***Output Specification*** | Check if the correct *Dispatcher Stub*  methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *Dispatcher Stub*  must have been already implemented. |

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| ***Test Case ID*** | IT18-2 |
| ***Test Item*** | Dispatcher Driver 🡪 Reservation Controller |
| ***Input Specification*** | Simulate *Reservation Controller* component typical input coming from *Dispatcher Driver* |
| ***Output Specification*** | Check if the correct *Reservation Controller* methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *Reservation Controller* must have been already implemented. |

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| ***Test Case ID*** | IT19-1 |
| ***Test Item*** | Active Rides Controller 🡪 Dispatcher Stub |
| ***Input Specification*** | Simulate *Dispatcher Stub*  component typical input coming from *Active Rides Controller* |
| ***Output Specification*** | Check if the correct *Dispatcher Stub*  methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *Dispatcher Stub*  must have been already implemented. |

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| ***Test Case ID*** | IT19-2 |
| ***Test Item*** | Dispatcher Driver 🡪 Active Rides Controller |
| ***Input Specification*** | Simulate *Active Rides Controller* component typical input coming from *Dispatcher Driver* |
| ***Output Specification*** | Check if the correct *Active Rides Controller* methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *Active Rides Controller* must have been already implemented. |

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| ***Test Case ID*** | IT20-1 |
| ***Test Item*** | User Registration Controller 🡪 Dispatcher Stub |
| ***Input Specification*** | Simulate *Dispatcher Stub*  component typical input coming from *User Registration Controller* |
| ***Output Specification*** | Check if the correct *Dispatcher Stub*  methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *Dispatcher Stub*  must have been already implemented. |

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| ***Test Case ID*** | IT20-2 |
| ***Test Item*** | Dispatcher Driver 🡪 User Registration Controller |
| ***Input Specification*** | Simulate *User Registration Controller* component typical input coming from *Dispatcher Driver* |
| ***Output Specification*** | Check if the correct *User Registration Controller* methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *User Registration Controller* must have been already implemented. |

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| ***Test Case ID*** | IT21-1 |
| ***Test Item*** | Charges Controller 🡪 Dispatcher Stub |
| ***Input Specification*** | Simulate *Dispatcher Stub*  component typical input coming from *Charges Controller* |
| ***Output Specification*** | Check if the correct *Dispatcher Stub*  methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *Dispatcher Stub*  must have been already implemented. |

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| ***Test Case ID*** | IT21-2 |
| ***Test Item*** | Dispatcher Driver 🡪 Charges Controller |
| ***Input Specification*** | Simulate *Charges Controller* component typical input coming from *Dispatcher Driver* |
| ***Output Specification*** | Check if the correct *Charges Controller* methods are invoked in the with respect to the input parameter values. |
| ***Environmental Needs*** | *Charges Controller* must have been already implemented. |

**4. TOOLS AND TEST EQUIPMENT REQUIRED**

**5. PROGRAM STUBS AND TEST DATA REQUIRED**

**6. EFFORT SPENT**