

### **LA3: Mutation Testing**

<b>Class</b>	<b>Mutation score before</b>	<b>Mutation score after</b>	<b>Related commit(s) links</b>
<i>ReservationController</i>	40%	70%	<a href="https://gitlab.ewi.tudelft.nl/cse2115/2021-2022/sem-group-25a/sem-repo-25a/-/merge_requests/93/diffs?commit_id=046ce2564e23aafec529c5d0390e92051ee4011">https://gitlab.ewi.tudelft.nl/cse2115/2021-2022/sem-group-25a/sem-repo-25a/-/merge_requests/93/diffs?commit_id=046ce2564e23aafec529c5d0390e92051ee4011</a> <a href="https://gitlab.ewi.tudelft.nl/cse2115/2021-2022/sem-group-25a/sem-repo-25a/-/merge_requests/93/diffs?commit_id=fbf5be6abd2c7daeac6873aaeb2eb1d82469f87c">https://gitlab.ewi.tudelft.nl/cse2115/2021-2022/sem-group-25a/sem-repo-25a/-/merge_requests/93/diffs?commit_id=fbf5be6abd2c7daeac6873aaeb2eb1d82469f87c</a>
<i>TeamRoomCapacityValidator</i>	50%	92%	<a href="https://gitlab.ewi.tudelft.nl/cse2115/2021-2022/sem-group-25a/sem-repo-25a/-/merge_requests/94/diffs?commit_id=f42b02acf47af313f7ea91bc01c3c62aa28b69d3">https://gitlab.ewi.tudelft.nl/cse2115/2021-2022/sem-group-25a/sem-repo-25a/-/merge_requests/94/diffs?commit_id=f42b02acf47af313f7ea91bc01c3c62aa28b69d3</a>
<i>UserIdStrategy</i>	40%	100%	<a href="https://gitlab.ewi.tudelft.nl/cse2115/2021-2022/sem-group-25a/sem-repo-25a/-/commit/51745b7daed55be79d0a4a429ac65a6aca1153a8">https://gitlab.ewi.tudelft.nl/cse2115/2021-2022/sem-group-25a/sem-repo-25a/-/commit/51745b7daed55be79d0a4a429ac65a6aca1153a8</a>
<i>EquipmentNameStrategy</i>	69%	92%	<a href="https://gitlab.ewi.tudelft.nl/cse2115/2021-2022/sem-group-25a/sem-repo-25a/-/commit/51745b7daed55be79d0a4a429ac65a6aca1153a8">https://gitlab.ewi.tudelft.nl/cse2115/2021-2022/sem-group-25a/sem-repo-25a/-/commit/51745b7daed55be79d0a4a429ac65a6aca1153a8</a>

## PIT reports before improving mutation scores

### nl.tudelft.sem.reservation.controllers

Number of Classes	Line Coverage	Mutation Coverage
3	89% <div><div></div><div>114/128</div><div></div></div>	53% <div><div></div><div>21/40</div><div></div></div>

#### Breakdown by Class

Name	Line Coverage	Mutation Coverage
<a href="#">ReservationController.java</a>	88% <div><div></div><div>56/64</div><div></div></div>	40% <div><div></div><div>8/20</div><div></div></div>
<a href="#">SportFacilityCommunicator.java</a>	100% <div><div></div><div>51/51</div><div></div></div>	73% <div><div></div><div>11/15</div><div></div></div>
<a href="#">UserFacilityCommunicator.java</a>	54% <div><div></div><div>7/13</div><div></div></div>	40% <div><div></div><div>2/5</div><div></div></div>

### nl.tudelft.sem.reservation.entities.chainofresponsibility

Number of Classes	Line Coverage	Mutation Coverage
5	92% <div><div></div><div>100/109</div><div></div></div>	72% <div><div></div><div>31/43</div><div></div></div>

#### Breakdown by Class

Name	Line Coverage	Mutation Coverage
<a href="#">BaseValidator.java</a>	50% <div><div></div><div>5/10</div><div></div></div>	50% <div><div></div><div>1/2</div><div></div></div>
<a href="#">ReservationChecker.java</a>	100% <div><div></div><div>17/17</div><div></div></div>	100% <div><div></div><div>5/5</div><div></div></div>
<a href="#">SportFacilityAvailabilityValidator.java</a>	88% <div><div></div><div>29/33</div><div></div></div>	73% <div><div></div><div>11/15</div><div></div></div>
<a href="#">TeamRoomCapacityValidator.java</a>	100% <div><div></div><div>24/24</div><div></div></div>	50% <div><div></div><div>6/12</div><div></div></div>
<a href="#">UserReservationBalanceValidator.java</a>	100% <div><div></div><div>25/25</div><div></div></div>	89% <div><div></div><div>8/9</div><div></div></div>

### nl.tudelft.sem.reservation.entities.strategy

Number of Classes	Line Coverage	Mutation Coverage
5	100% <div><div></div><div>75/75</div><div></div></div>	71% <div><div></div><div>27/38</div><div></div></div>

#### Breakdown by Class

Name	Line Coverage	Mutation Coverage
<a href="#">BasicPremiumUserStrategy.java</a>	100% <div><div></div><div>16/16</div><div></div></div>	70% <div><div></div><div>7/10</div><div></div></div>
<a href="#">BookingSystem.java</a>	100% <div><div></div><div>8/8</div><div></div></div>	100% <div><div></div><div>2/2</div><div></div></div>
<a href="#">ChronologicalStrategy.java</a>	100% <div><div></div><div>15/15</div><div></div></div>	88% <div><div></div><div>7/8</div><div></div></div>
<a href="#">EquipmentNameStrategy.java</a>	100% <div><div></div><div>22/22</div><div></div></div>	69% <div><div></div><div>9/13</div><div></div></div>
<a href="#">UserIdStrategy.java</a>	100% <div><div></div><div>14/14</div><div></div></div>	40% <div><div></div><div>2/5</div><div></div></div>

## PIT reports after improving mutation scores

### nl.tudelft.sem.reservation.controllers

Number of Classes	Line Coverage	Mutation Coverage
3	89% <div><div></div><div>114/128</div><div></div></div>	68% <div><div></div><div>27/40</div><div></div></div>

#### Breakdown by Class

Name	Line Coverage	Mutation Coverage
<a href="#">ReservationController.java</a>	88% <div><div></div><div>56/64</div><div></div></div>	70% <div><div></div><div>14/20</div><div></div></div>
<a href="#">SportFacilityCommunicator.java</a>	100% <div><div></div><div>51/51</div><div></div></div>	73% <div><div></div><div>11/15</div><div></div></div>
<a href="#">UserFacilityCommunicator.java</a>	54% <div><div></div><div>7/13</div><div></div></div>	40% <div><div></div><div>2/5</div><div></div></div>

### nl.tudelft.sem.reservation.entities.chainofresponsibility

Number of Classes	Line Coverage	Mutation Coverage
5	92% <div><div></div><div>100/109</div><div></div></div>	84% <div><div></div><div>36/43</div><div></div></div>

#### Breakdown by Class

Name	Line Coverage	Mutation Coverage
<a href="#">BaseValidator.java</a>	50% <div><div></div><div>5/10</div><div></div></div>	50% <div><div></div><div>1/2</div><div></div></div>
<a href="#">ReservationChecker.java</a>	100% <div><div></div><div>17/17</div><div></div></div>	100% <div><div></div><div>5/5</div><div></div></div>
<a href="#">SportFacilityAvailabilityValidator.java</a>	88% <div><div></div><div>29/33</div><div></div></div>	73% <div><div></div><div>11/15</div><div></div></div>
<a href="#">TeamRoomCapacityValidator.java</a>	100% <div><div></div><div>24/24</div><div></div></div>	92% <div><div></div><div>11/12</div><div></div></div>
<a href="#">UserReservationBalanceValidator.java</a>	100% <div><div></div><div>25/25</div><div></div></div>	89% <div><div></div><div>8/9</div><div></div></div>

### nl.tudelft.sem.reservation.entities.strategy

Number of Classes	Line Coverage	Mutation Coverage
5	100% <div><div></div><div>75/75</div><div></div></div>	87% <div><div></div><div>33/38</div><div></div></div>

#### Breakdown by Class

Name	Line Coverage	Mutation Coverage
<a href="#">BasicPremiumUserStrategy.java</a>	100% <div><div></div><div>16/16</div><div></div></div>	70% <div><div></div><div>7/10</div><div></div></div>
<a href="#">BookingSystem.java</a>	100% <div><div></div><div>8/8</div><div></div></div>	100% <div><div></div><div>2/2</div><div></div></div>
<a href="#">ChronologicalStrategy.java</a>	100% <div><div></div><div>15/15</div><div></div></div>	88% <div><div></div><div>7/8</div><div></div></div>
<a href="#">EquipmentNameStrategy.java</a>	100% <div><div></div><div>22/22</div><div></div></div>	92% <div><div></div><div>12/13</div><div></div></div>
<a href="#">UserIdStrategy.java</a>	100% <div><div></div><div>14/14</div><div></div></div>	100% <div><div></div><div>5/5</div><div></div></div>