Asserts:

* whenever there are new read items, then the model has to change
* Whenever there are old read items, then the initial model cannot be null

1. User just registered and added a bunch of feeds

|  |  |
| --- | --- |
| UserFeed | Feed1, feed2, feed3, … |
| UserItem | Null |
| Model (before) | Null; valid old model |
| Model (after) | Null; valid old model <no change> |

Under which scenario will user have valid old model for #1?

1. User has unread items

|  |  |
| --- | --- |
| UserFeed | Feed1, feed2, feed3, … |
| UserItem | Unread item1, unread item2, unread item3 |
| Model (before) | Null; valid old model |
| Model (after) | Null; valid old model <no change> |

1. User has new read items

|  |  |
| --- | --- |
| UserFeed | Feed1, feed2, feed3, … |
| UserItem | New read item1, new read item2, new read item3 |
| Model (before) | Null; valid old model |
| Model (after) | Valid new model |

1. User has old read items

|  |  |
| --- | --- |
| UserFeed | Feed1, feed2, feed3, … |
| UserItem | Old read item1, old read item2, old read item3 |
| Model (before) | Valid old model |
| Model (after) | Valid old model <no change> |

1. User has unread items, newly read item

|  |  |
| --- | --- |
| UserFeed | Feed1, feed2, feed3, … |
| UserItem | Unread item1, unread item2, new read item1, new read item2 |
| Model (before) | Null; valid old model |
| Model (after) | Valid new model |

1. User has unread items, old read items

|  |  |
| --- | --- |
| UserFeed | Feed1, feed2, feed3, … |
| UserItem | Unread item1, unread item2, old read item1, old read item2 |
| Model (before) | Valid old model |
| Model (after) | Valid old model <no change> |

1. User has newly read and old read items

|  |  |
| --- | --- |
| UserFeed | Feed1, feed2, feed3, … |
| UserItem | New read item1, new read item2, old read item1, old read item2 |
| Model (before) | Valid old model |
| Model (after) | Valid new model |

1. User has unread item, newly read item, old read item

|  |  |
| --- | --- |
| UserFeed | Feed1, feed2, feed3, … |
| UserItem | Unread item1, unread item2, new read item1, new read item2, old read item1, old read item2 |
| Model (before) | Valid old model |
| Model (after) | Valid new model |