|  |  |
| --- | --- |
| Name of Bug | Dividing by zero in length |
| Author of Report | Alex |
| Date | 10/4/2019 |
| Path to Location of Bug | vector -> Vector -> setLength  vector -> Vector-> scale |
| Conditions | |  |  | | --- | --- | | Condition 1 | Length must be zero | |  |  | |  |  | |  |  | |
| Cause | There is an unchecked divide that causes an error when using the vector later. |
| Proposed solutions | |  |  | | --- | --- | | Add an exception | Throw an illegal argument exception when zero is given | | Default | If a zero is given set the vector to the zero vector | |  |  | |
| Chosen solution | Add an exception |

|  |  |
| --- | --- |
| Name of Bug | Normalizing a vector with value of x and y component being zero |
| Author of Report | ChiaTse |
| Date | 10/11/2019 |
| Path to Location of Bug |  |
| Conditions | |  |  | | --- | --- | |  |  | |  |  | |  |  | |  |  | |
| Cause |  |
| Proposed solutions | |  |  | | --- | --- | | Idea one |  | | Idea two |  | |  |  | |
| Chosen solution | Idea one |

|  |  |
| --- | --- |
| Name of Bug | Set a bad angle (up) |
| Author of Report | ChiaTse |
| Date | 10/11/2019 |
| Path to Location of Bug | vector -> Vector -> setAngle() |
| Conditions | |  |  | | --- | --- | |  |  | |  |  | |  |  | |  |  | |
| Cause | Inside the method setAngle() of Vector class, the constructor to create the new vector with new angle was set up incorrectly and missed its third parameter, boolean. (the 2 parameters were oppositely passed into the method) Therefore, the new vector was set up by the Cartesian Vector constructor. |
| Proposed solutions | |  |  | | --- | --- | | Correct the setAngle() method | Switch the first two parameters’ sequence and add the third parameter (boolean true). | |  |  | |  |  | |
| Chosen solution | Correct the setAngle() method |

|  |  |
| --- | --- |
| Name of Bug | Set a bad angle (down) |
| Author of Report | ChiaTse |
| Date | 10/11/2019 |
| Path to Location of Bug | vector -> Vector -> setAngle() |
| Conditions | |  |  | | --- | --- | |  |  | |  |  | |  |  | |  |  | |
| Cause | Inside the method setAngle() of Vector class, the constructor to create the new vector with new angle was set up incorrectly and missed its third parameter, boolean. (the 2 parameters were oppositely passed into the method) Therefore, the new vector was set up by the Cartesian Vector constructor. |
| Proposed solutions | |  |  | | --- | --- | | Correct the setAngle() method | Switch the first two parameters’ sequence and add the third parameter (boolean true). | |  |  | |  |  | |
| Chosen solution | Correct the setAngle() method |

|  |  |
| --- | --- |
| Name of Bug | Set a bad angle (left) |
| Author of Report | ChiaTse |
| Date | 10/11/2019 |
| Path to Location of Bug | vector -> Vector -> setAngle() |
| Conditions | |  |  | | --- | --- | |  |  | |  |  | |  |  | |  |  | |
| Cause | Inside the method setAngle() of Vector class, the constructor to create the new vector with new angle was set up incorrectly and missed its third parameter, boolean. (the 2 parameters were oppositely passed into the method) Therefore, the new vector was set up by the Cartesian Vector constructor. |
| Proposed solutions | |  |  | | --- | --- | | Correct the setAngle() method | Switch the first two parameters’ sequence and add the third parameter (boolean true). | |  |  | |  |  | |
| Chosen solution | Correct the setAngle() method |

|  |  |
| --- | --- |
| Name of Bug | Zero vector math |
| Author of Report | ChiaTse |
| Date | 10/11/2019 |
| Path to Location of Bug |  |
| Conditions | |  |  | | --- | --- | |  |  | |  |  | |  |  | |  |  | |
| Cause |  |
| Proposed solutions | |  |  | | --- | --- | | Idea one |  | | Idea two |  | |  |  | |
| Chosen solution | Idea one |

|  |  |
| --- | --- |
| Name of Bug |  |
| Author of Report | ChiaTse |
| Date | 10/11/2019 |
| Path to Location of Bug |  |
| Conditions | |  |  | | --- | --- | |  |  | |  |  | |  |  | |  |  | |
| Cause |  |
| Proposed solutions | |  |  | | --- | --- | | Idea one |  | | Idea two |  | |  |  | |
| Chosen solution | Idea one |

|  |  |
| --- | --- |
| Name of Bug |  |
| Author of Report | ChiaTse |
| Date | 10/11/2019 |
| Path to Location of Bug |  |
| Conditions | |  |  | | --- | --- | |  |  | |  |  | |  |  | |  |  | |
| Cause |  |
| Proposed solutions | |  |  | | --- | --- | | Idea one |  | | Idea two |  | |  |  | |
| Chosen solution | Idea one |