IP Calculator Test Case Version 1.0

Test Case 1: Main Menu Processing

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| Steps | Expected Results | Result:  Fail (Runtime Crash, unexpected result) or  Pass |
| 1.Run Program, press enter key | Should prompt user to enter IP address | Pass |
| 1.Run Program, press random keys | Should prompt user that input is invalid | Fail (unexpected result):  Program turns off |
| 1. Run Program, press q key to quit | Program should end | Pass |
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Test Case 2 : Secondary Menu Processing

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| Steps | Expected Results | Result:  Fail (Runtime Crash, unexpected result) or  Pass |
| 1.Enter a valid IP address  2.Enter a valid subnet address | Program should display following:  Subnet converted into binary  Subnet bits  IP converted into binary  Address class  Network ID  Broadcast ID  First host address  Last host address  Total subnets  Total hosts | Pass |
| 1. Enter random letters into IP address prompt  2. Enter random letters into Subnet prompt  3. Re-enter valid IP address  4. Re-enter valid subnet address | Program should prompt user that inputs are invalid and restarts menu | Fail (Runtime Crash):  Program successfully calculates and displays valid information, but invalid data is still saved and causes a runtime crash |
| 1. Enter an invalid IP address but with valid IP format  2. Enter an invalid subnet address but with valid subnet format | Program should attempt to display calculated results, but will tell user data entered is not valid | Fail (Runtime Crash):  Program throws an array index out of bound error and crashes |
| 1. Enter random letters into IP address prompt  2. Enter valid subnet address  3. Re-enter valid IP address  4. Re-enter valid subnet address | Program should skip calculations and prompt user to re-enter valid data | Fail (Runtime Crash):  Program successfully calculates and displays valid information, but invalid data is still saved and causes a runtime crash |
| 1. Enter a valid IP address  2. Enter random letters into subnet prompt  3. Re-enter valid IP address  4. Re-enter valid subnet address | Program should skip calculations and prompt user to re-enter valid data | Fail (Runtime Crash):  Program successfully calculates and displays valid information, but invalid data is still saved and causes a runtime crash |