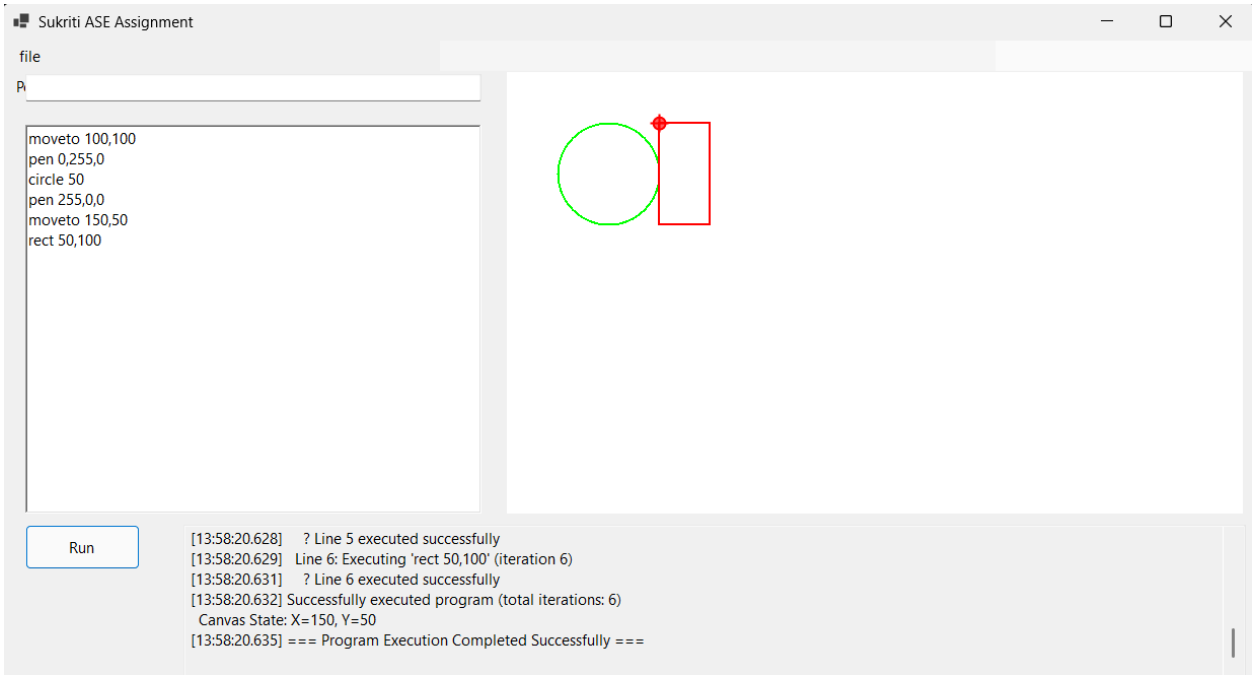
Advanced Software Engineering Component-2 Documentation

Student Name:Sukriti Baryal
ID : c7466782
Group : ‘The British College’

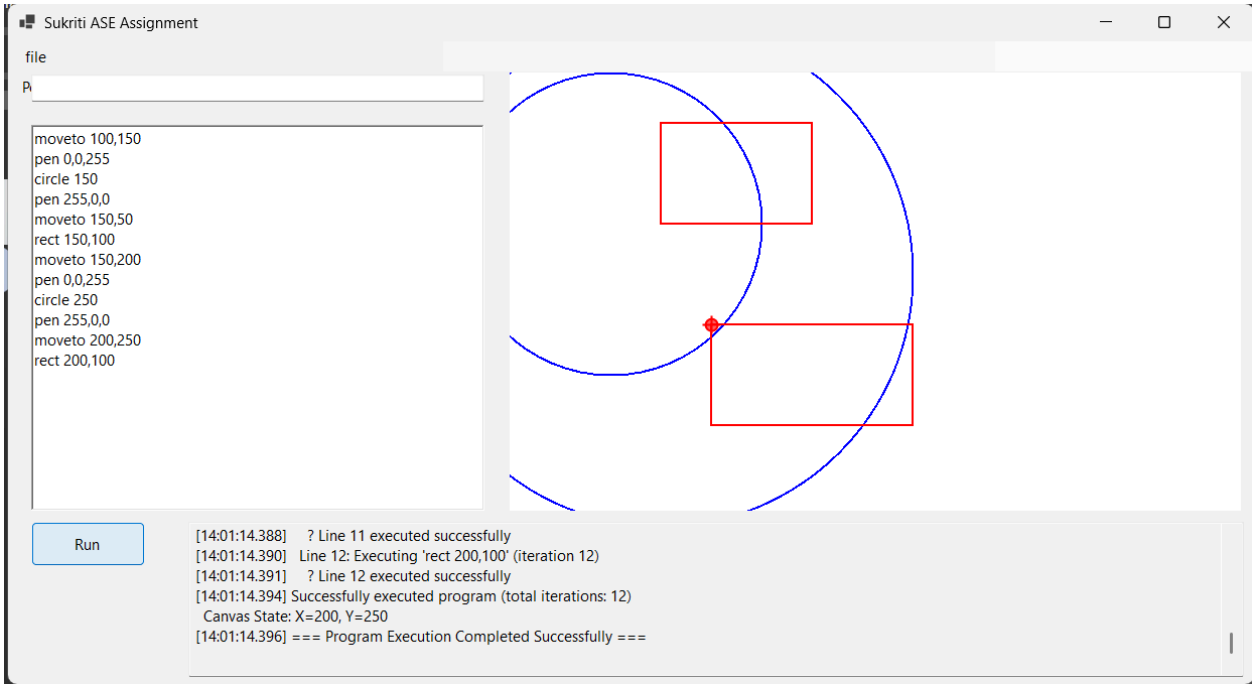
Programs

A. Basic Drawing:

1. Restricted Drawing:

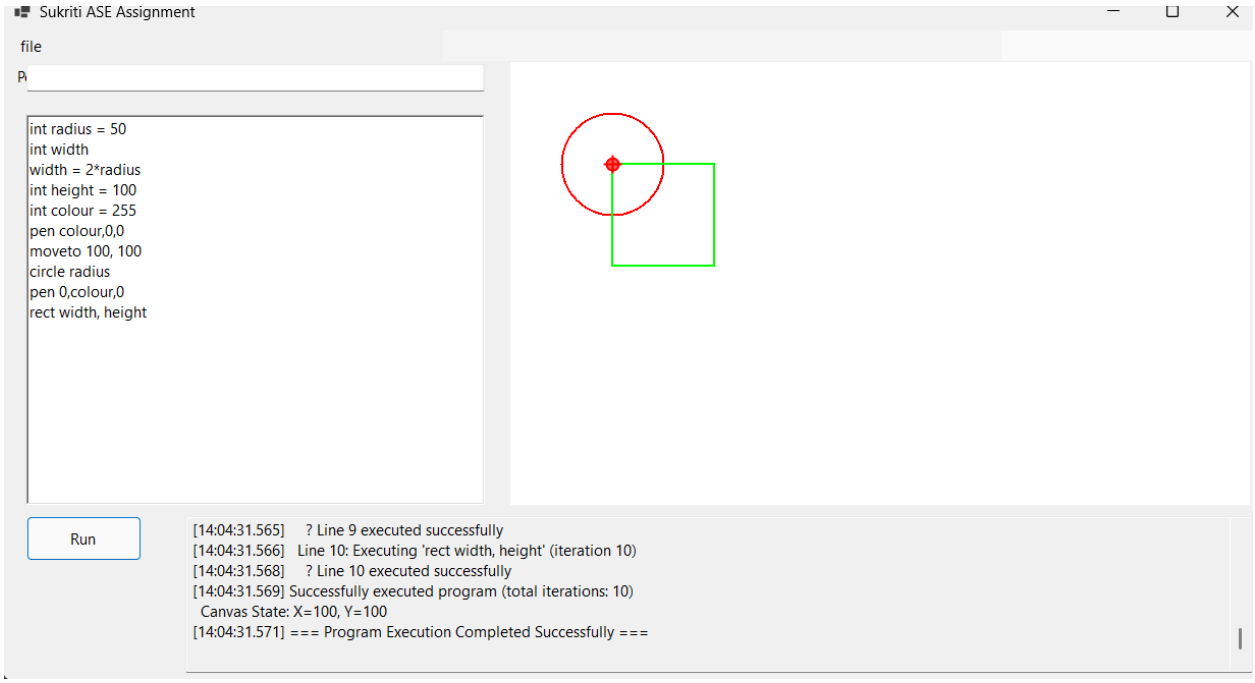


2. Unestricted Drawing:

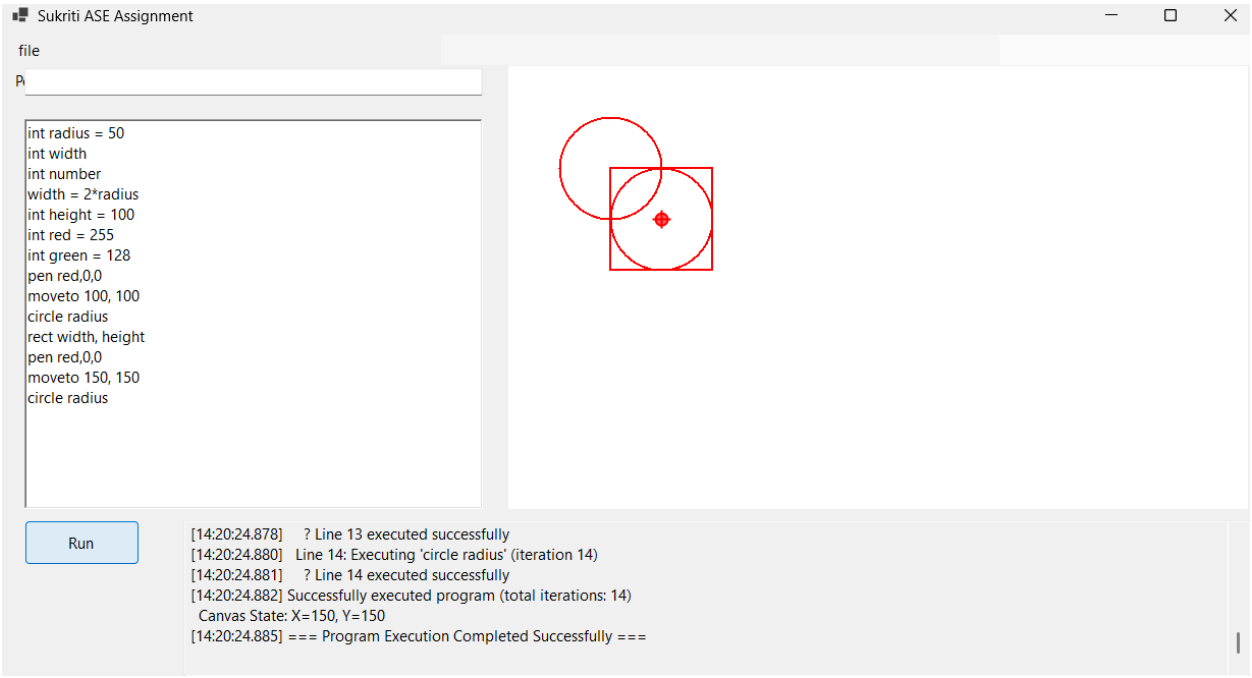


B. Variables:

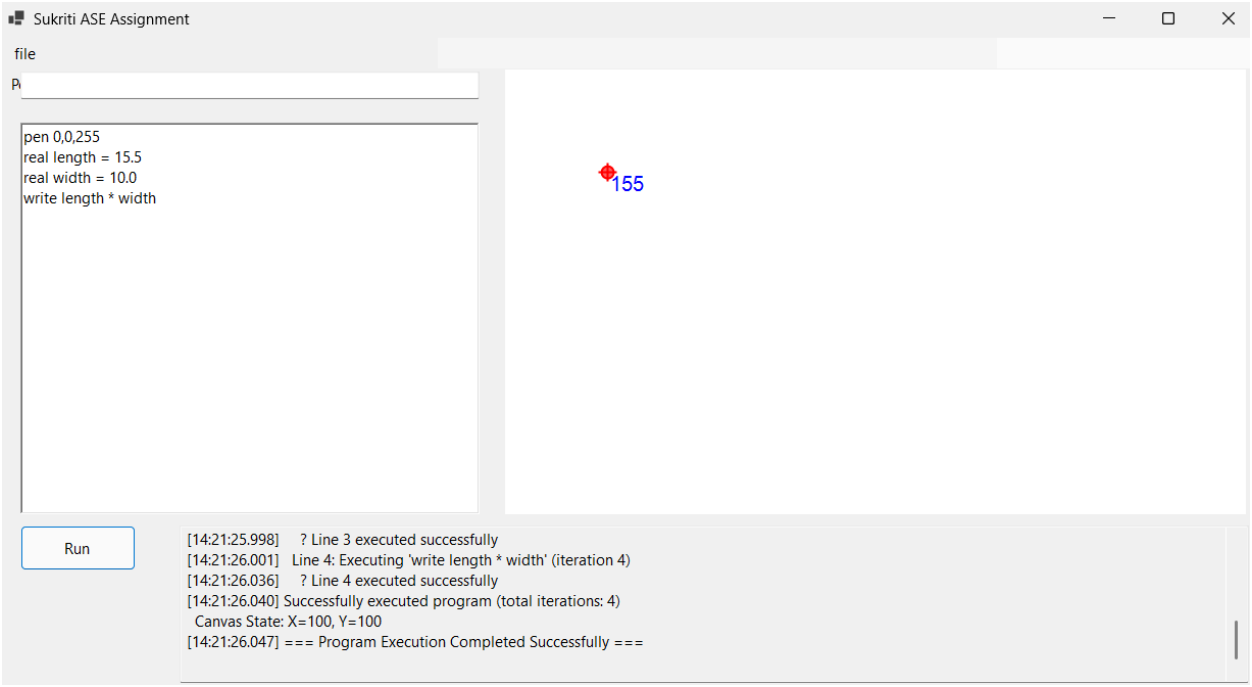
1. Restricted Int:



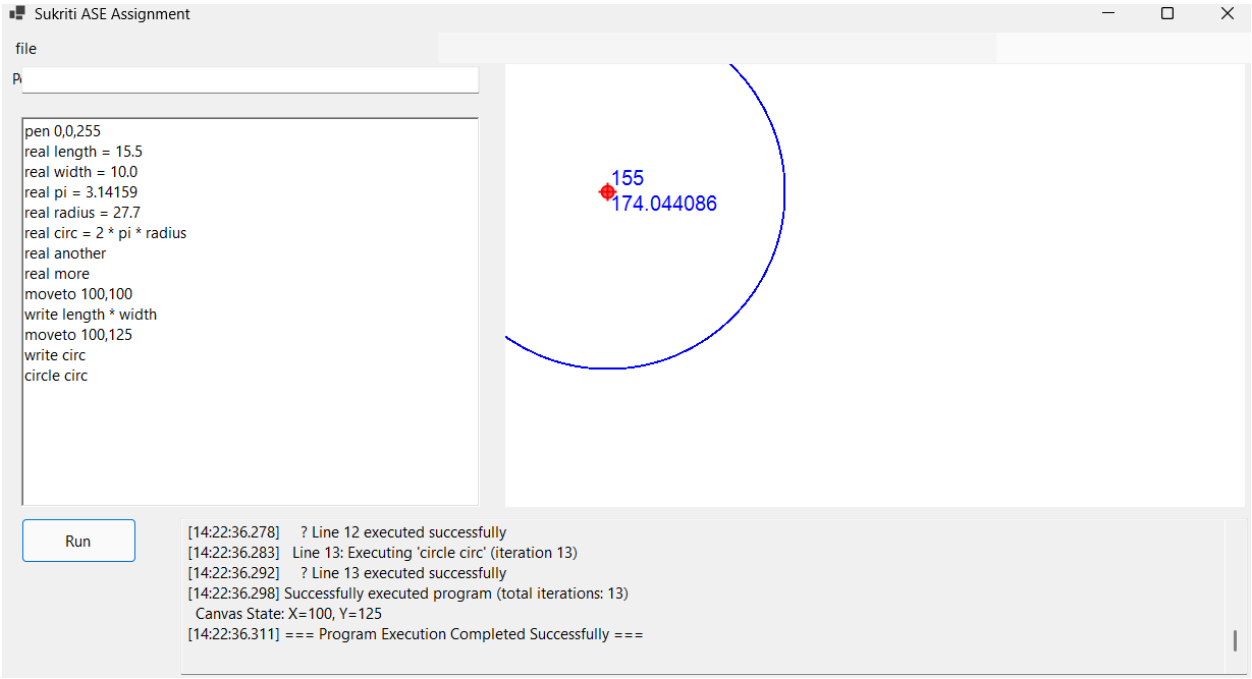
2. Unestricted Int:



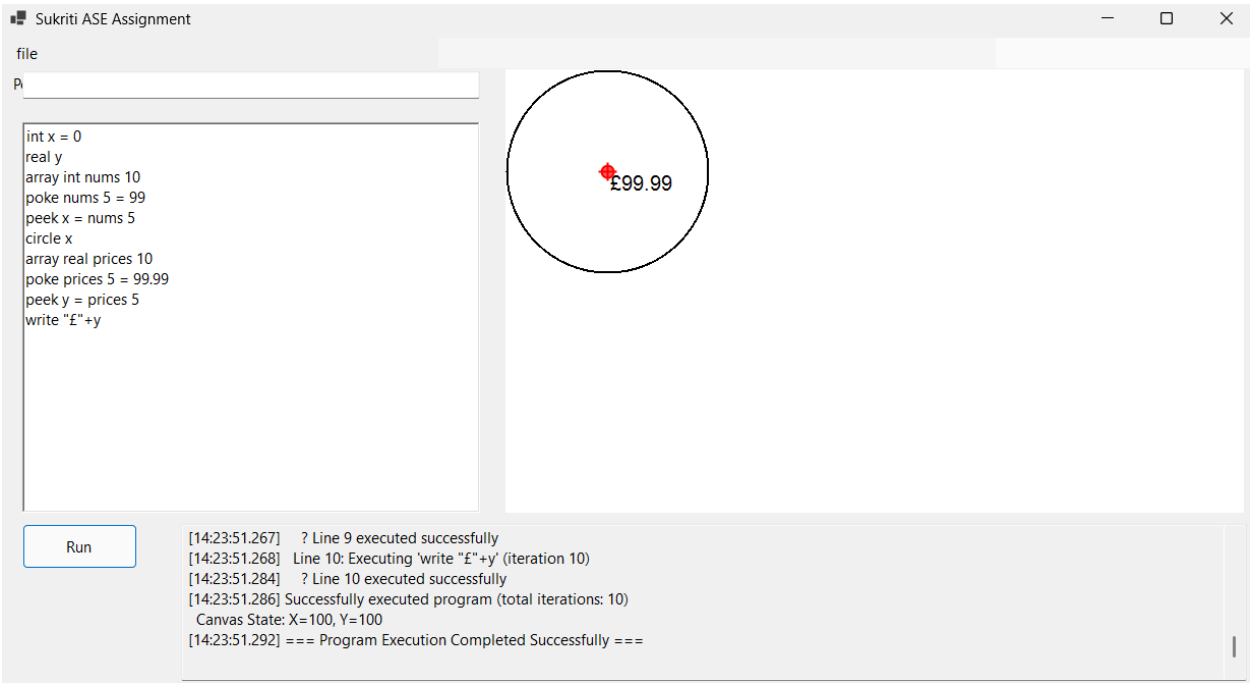
3. Restricted Reals:



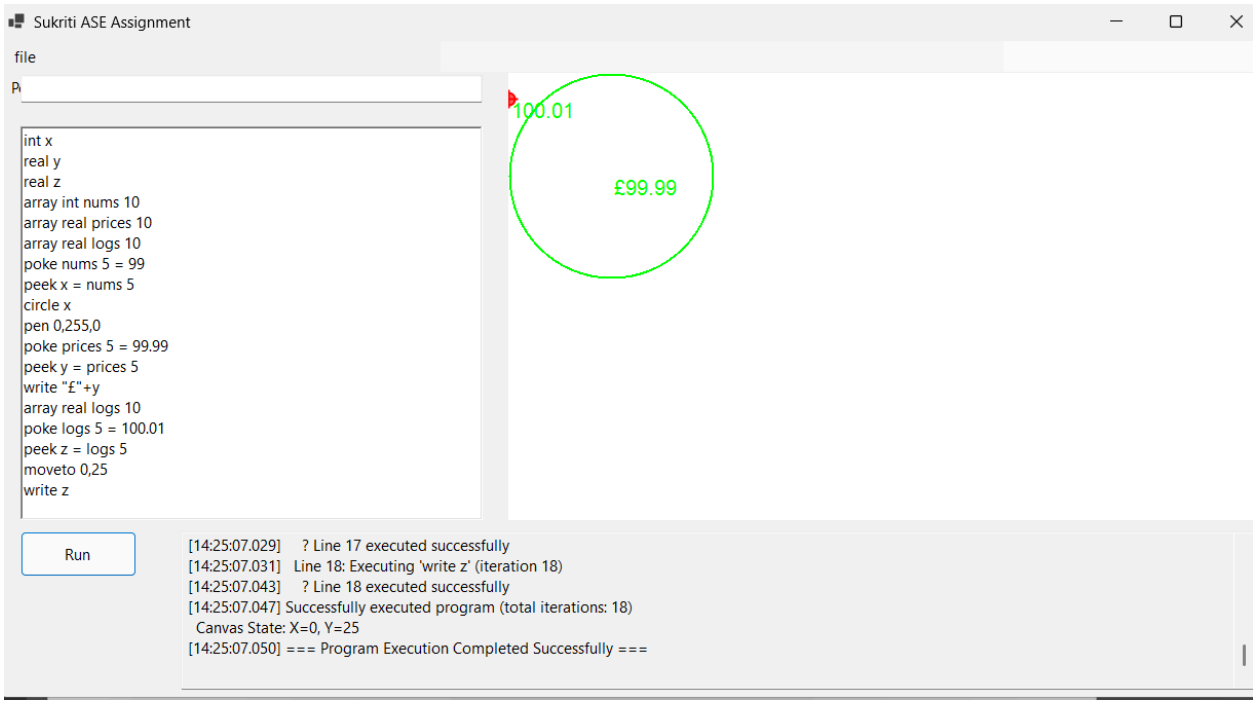
4. Unrestricted Reals:



5. Restricted Arrays:

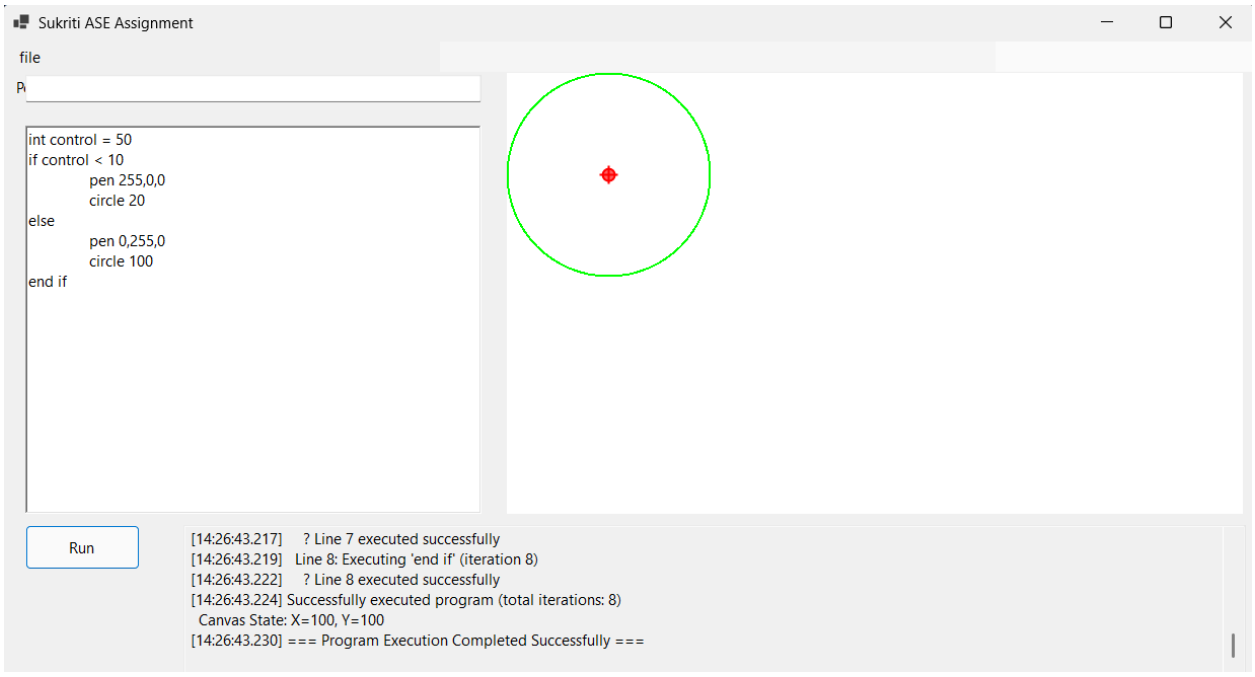


6. Unrestricted Arrays:

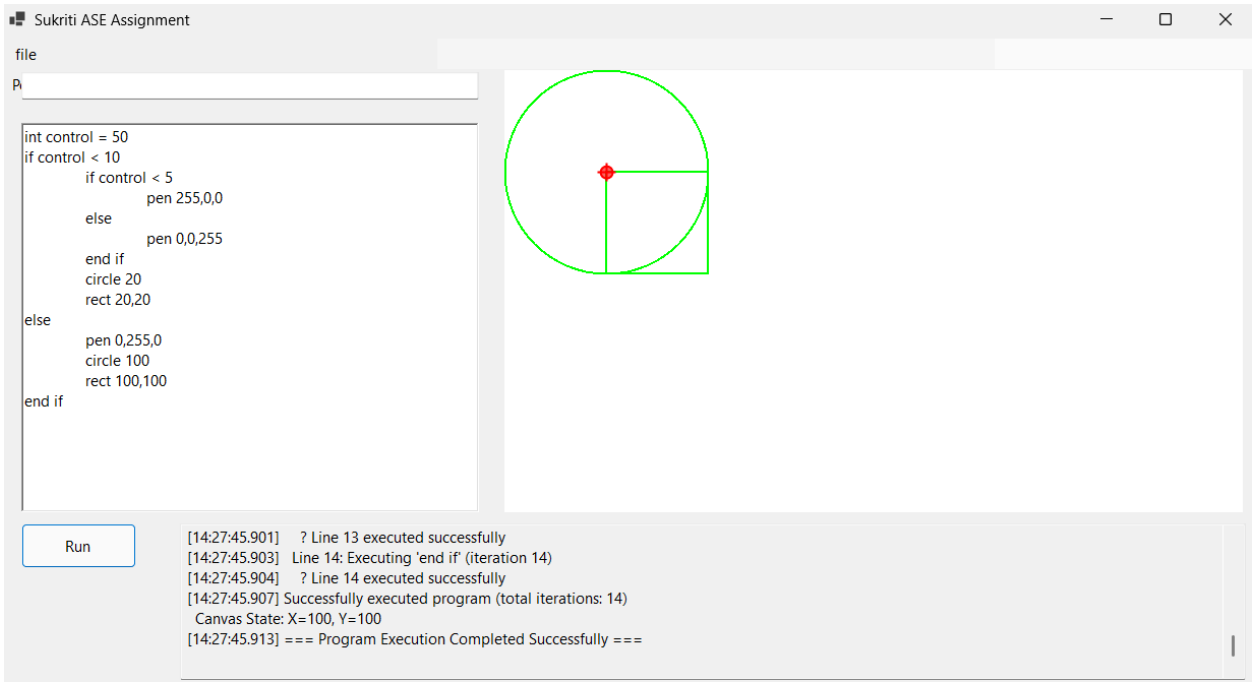


C. Ifs and Loops:

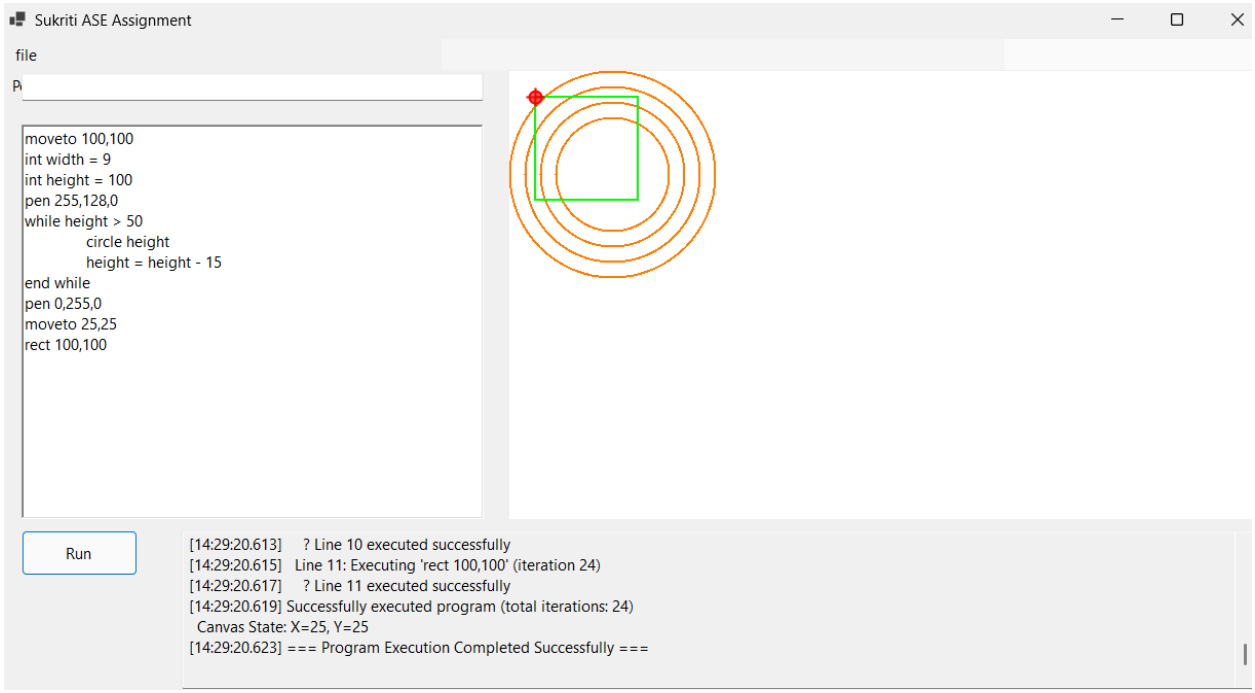
1. restricted ifs:



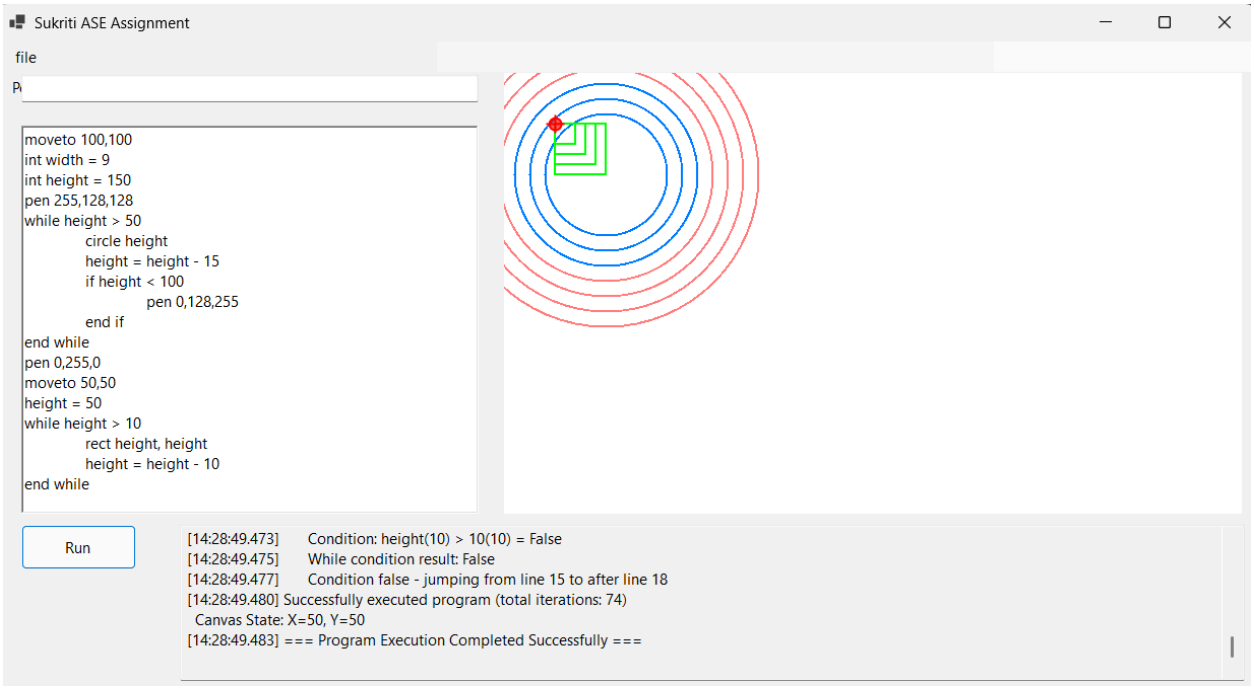
2. Unrestricted ifs:



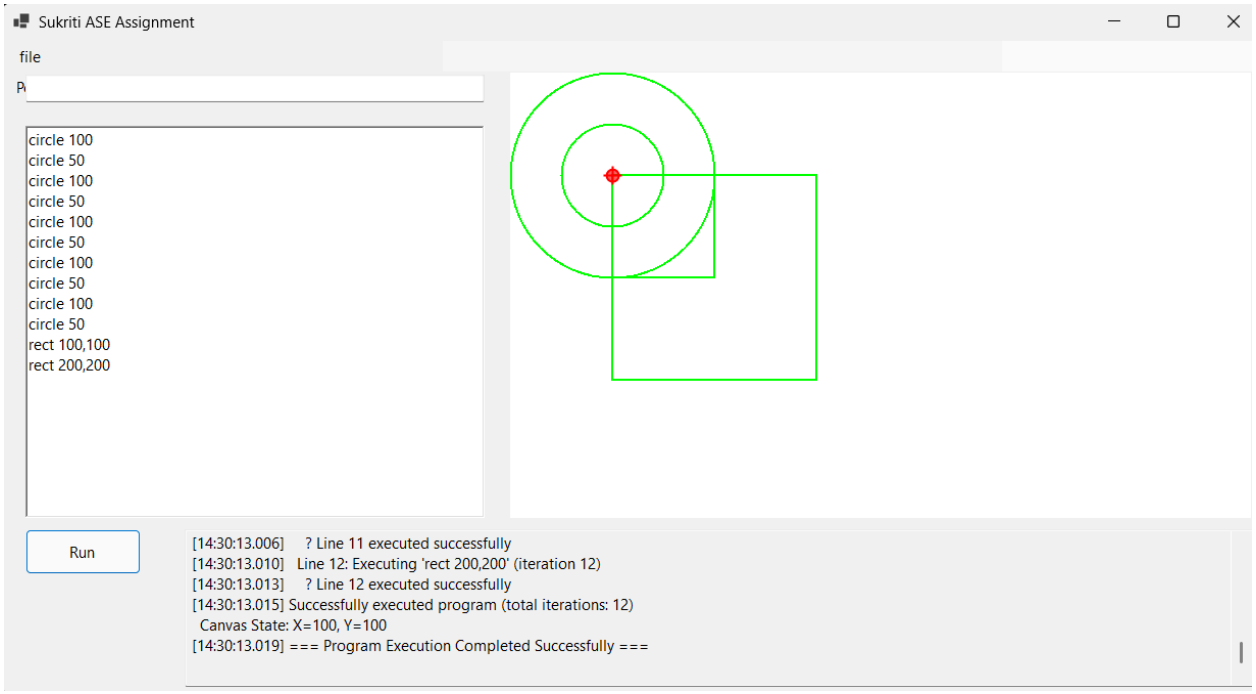
3. Restricted whiles:



4. Unrestricted whiles:



D. Miscellaneous:



Test Cases:

Test Scenario
Validate AppArray, AppInt, AppReal, and AppWhile command execution.

Test Steps and Results

1. Declare Integer Variable

Task: To verify that declaring an integer variable stores it correctly in the program memory.
Test Data: int x = 10
Expected Result: Variable is created and stores the correct value.
Actual Result: As Expected
Status: PASS

2. Create Integer Array

Task: To verify that an integer array can be created with specified dimensions.
Test Data: int array 3 4
Expected Result: Array is created with correct row and column size.
Actual Result: As Expected
Status: PASS

3. Evaluate While Condition

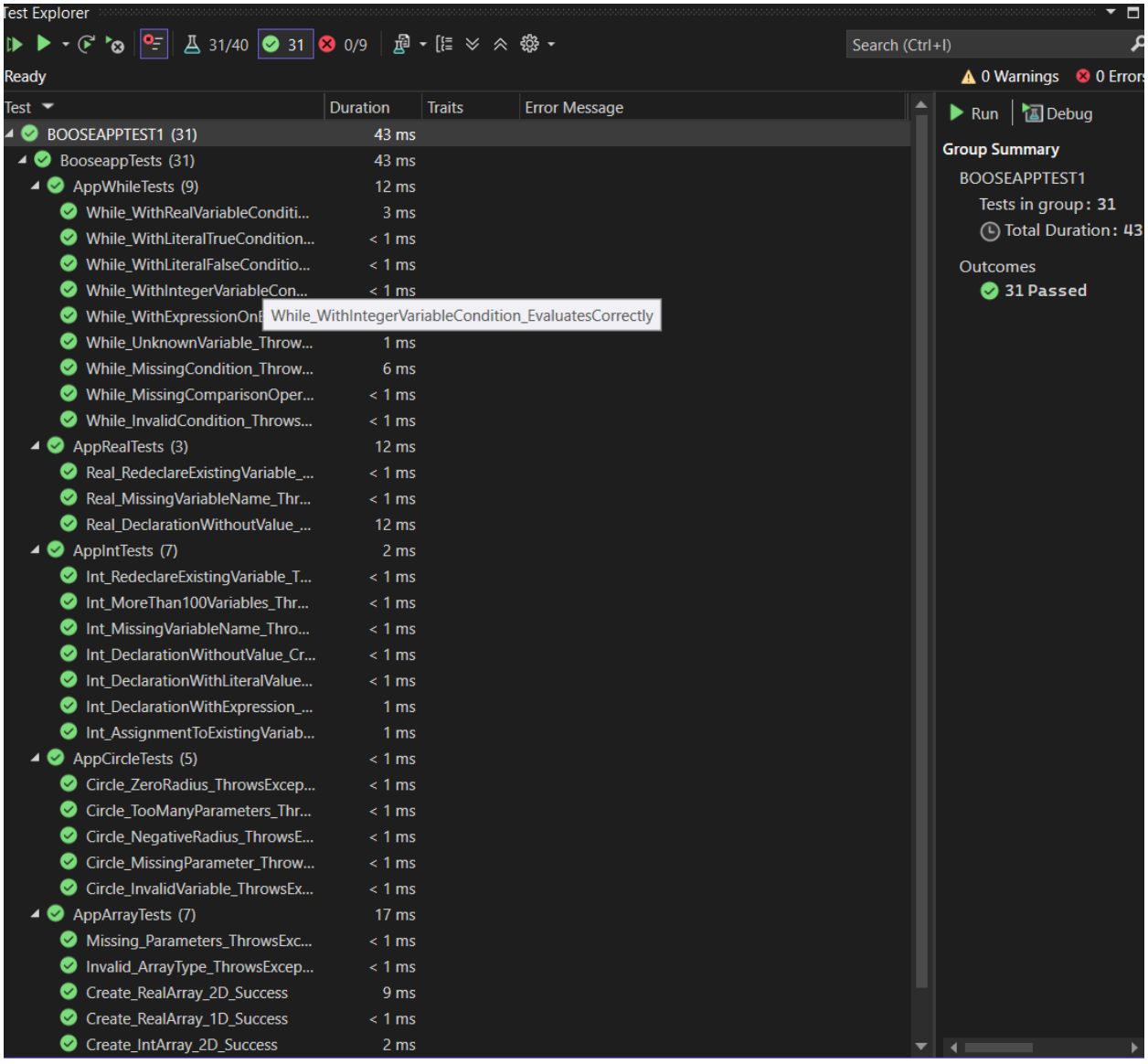
Task: To ensure that a while-loop condition is evaluated correctly using an integer variable.
Test Data: while x > 5
Expected Result: Condition is evaluated without errors.
Actual Result: As Expected
Status: PASS

4. Access Real Array Value

Task: To verify that values in a real array can be accessed correctly.
Test Data: real r = 2.5
Expected Result: Correct real value is returned.
Actual Result: As Expected
Status: PASS

	A	B	C	D	E	F
1	**TEST CASE REPORT**					
2						
3	**Test Case ID**	TC_001 – TC_004		**Test Description**	BOOSE Command Unit Tests	
4	**Created By**	Sukriti Baryal		**Reviewed By**	Module Leader	
5	**Date Tested**	10/01/2026		**Final Result**	PASS	
6						
7	**Prerequisites**		**Test Data**			
8	1. BOOSE App Installed		1. int x = 10			
9	2. StoredProgram Initialized		2. real r = 2.5			
10	3. Canvas Loads Without Errors		3. int array 3 4			
11	4. Parser Accepts Input		4. while x > 5			
12						
13	**Test Scenario: Validate AppArray, AppInt, AppReal, and AppWhile command execution**					
14	**Step #**	**Step Details**	**Expected Results**	**Actual Results**	**Status**	
15	1	Declare integer variable	Variable stored correctly	As Expected	PASS	
16	2	Create integer array	Array created with dimensions	As Expected	PASS	
17	3	Evaluate while condition	Condition evaluated	As Expected	PASS	
18	4	Access real array value	Correct value returned	As Expected	PASS	
19						
20						
21						

Test case running:


Test Explorer
31/40
31
0/9
Search (Ctrl+I)
Ready
0 Warnings
0 Errors
Test
Duration
Traits
Error Message
BOOSEAPPTEST1 (31) 43 ms
BooseappTests (31) 43 ms
AppWhileTests (9) 12 ms
While_WithRealVariableConditi... 3 ms
While_WithLiteralTrueCondition... < 1 ms
While_WithLiteralFalseConditio... < 1 ms
While_WithIntegerVariableCon... < 1 ms
While_WithExpressionOn
While_WithIntegerVariableCondition_EvaluatesCorrectly
While_UnknownVariable_Throw... 1 ms
While_MissingCondition_Throw... 6 ms
While_MissingComparisonOper... < 1 ms
While_InvalidCondition_Throws... < 1 ms
AppRealTests (3) 12 ms
Real_RedeclareExistingVariable_... < 1 ms
Real_MissingVariableName_Thr... < 1 ms
Real_DeclarationWithoutValue_... 12 ms
AppIntTests (7) 2 ms
Int_RedeclareExistingVariable_T... < 1 ms
Int_MoreThan100Variables_Thr... < 1 ms
Int_MissingVariableName_Thro... < 1 ms
Int_DeclarationWithoutValue_Cr... < 1 ms
Int_DeclarationWithLiteralValue... < 1 ms
Int_DeclarationWithExpression_... 1 ms
Int_AssignmentToExistingVariab... 1 ms
AppCircleTests (5) < 1 ms
Circle_ZeroRadius_ThrowsExcep... < 1 ms
Circle_TooManyParameters_Thr... < 1 ms
Circle_NegativeRadius_ThrowsE... < 1 ms
Circle_MissingParameter_Throw... < 1 ms
Circle_InvalidVariable_ThrowsEx... < 1 ms
AppArrayTests (7) 17 ms
Missing_Parameters_ThrowsExc... < 1 ms
Invalid_ArrayType_ThrowsExcep... < 1 ms
Create_RealArray_2D_Success 9 ms
Create_RealArray_1D_Success < 1 ms
Create_IntArray_2D_Success 2 ms
Run
Debug
Group Summary
BOOSEAPPTEST1
Tests in group: 31
Total Duration: 43
Outcomes
31 Passed