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Midterm - Problem 1

System Libraries:

iostream

Function Main

Declare Variables:
x

Prompt:
Ask user to enter
a positive integer.

User's Input:
User's input stored
as variable 'x'.

User's input is
an even number

FALSE

TRUE

Assign Counter:
int a = 1

Increment Counter

B

a<=x

FALSE → E

TRUE

Assign Counter:
int b = 1

Increment Counter

A

b<=x

FALSE → **End Line** → B

TRUE

a=b *or* (x+1)-a

TRUE → **Output:** Variable 'b' → A

FALSE

Output: a " " space → A

Assign Counter:
int a = x

a>=1

TRUE

FALSE → E

Decrement Counter

D

Assign Counter:
int b = x

b>=1

TRUE

FALSE → **End Line** → D

Decrement Counter

C

a=b *or* (x+1)-a

FALSE → **Output:** a " " space → C

TRUE

Output: Variable 'b' → C

E → **Return**

Flowchart: Midterm - Problem 1