

PROBLEM 4

Write a program to receive value of an angle in degrees and check whether the sum of squares of sine and cosine of this angle is equal to 1

ALGORITHM

1. Start
2. Declare float variables angle,sinang,cosang,result.
3. Take angle as input
4. Calculate sine and cosine of angle and store them into the variables sinang and cosang respectively.
5. Calculate the squares of sinang and cosang, add them and store them into the variable result.
6. If result is equal to 1, display "True". Else, display "False"

PSEUDOCODE

```
START
DECLARE FLOAT angle,sinang,cosang,result
INPUT angle
ASSIGN sine of angle to sinang
ASSIGN cosine of angle to cosang
ADD square of sinang and square of cosang
ASSIGN to result
IF result is equal to 1
    DISPLAY "true"
ELSE
    DISPLAY "false"
ENDIF
STOP
```

FLOWCHART

```
flowchart TD
A([Start]) --> B[/Declare float variables angle,sinang, cosang,result/]
B --> C[/Take angle as input/]
C --> D[/Calculate sine and cosine of angle and store them into the variables sinang and cosang/]
D --> E[/Calculate the squares of sinang and cosang, add them and store them into the variable result/]
E --> F{If result is equal to 1}
F --> |True|G[/Display "True"/]
F --> |False|H[/Display "False"/]
G --> I([Stop])
H --> I
```