Assignment 5 pseudocodes

1. *Problem 1 solution*

CLASS MyRectangle

BEGIN

METHOD MAIN

BEGIN

READ user\_input for width and height of rectangle

width🡨user\_input value for width

height🡨user\_input value for height

area🡨Area(width, height)

perimeter🡨Perimeter(width, height)

PRINT Entered width: width

PRINT Entered height: height

IF (isValid(width, height)==true)THEN

PRINT Area: area

PRINT Perimeter: perimeter

ELSE

PRINT This is invalid rectangle. Try again.

ENDIF

END MAIN

METHOD isValid(w, h)

BEGIN

IF((w+h)>30)THEN

RETURN true

ELSE

RETURN false

ENDIF

END isValid

METHOD Area(w, h)

BEGIN

Area🡨w\*h

RETURN Area

END Area

METHOD Perimeter(w, h)

BEGIN

Perimeter🡨2\*(w+h)

RETURN Perimeter

END Perimeter

END MyRectangle

1. *Problem 2 solution*

CLASS FeetMeters

BEGIN

METHOD MAIN

BEGIN

PRINT Feet Meter Meter Feet

k🡨1.0

WHILE (k<=20.0)

PRINT k feetToMeter(k) k meterToFeet(k)

k🡨k+1

ENDWHILE

END MAIN

METHOD feetToMeter(j)

BEGIN

meter🡨0

FOR( n🡨1.0;n<=j;n🡨n+1)

meter🡨0.305\*n

ENDFOR

RETURN meter

END feetToMeter

METHOD meterToFeet(j)

BEGIN

feet🡨0

FOR(n🡨1.0;n<=j;n🡨n+1)

feet🡨3.279\*n

ENDFOR

RETURN feet

END meterToFeet

END FeetMeters

1. *Problem 3 solution*

CLASS PrintTableSeries

BEGIN

METHOD MAIN

BEGIN

READ user\_input for an integer

n🡨user\_input for an integer

PRINT i Sum(i)

i🡨1

WHILE (i<=n)

sum🡨displaySums(i)

PRINT i displaySums(i)

i🡨i+1

ENDWHILE

END MAIN

METHOD displaySums(k)

BEGIN

sum🡨0

FOR (i🡨1.0;i<=k;i🡨i+1)

sum🡨sum + ((i/(i+1))

ENDFOR

RETURN sum

END displaySums

END PrintTableSeries

1. *Problem 4 solution*

CLASS PalindromePrime

BEGIN

METHOD MAIN

BEGIN

total🡨50

displayperline🡨10

count🡨1

number🡨2

WHILE (count<=total)

IF (isPrime(number) && isPalindrome(number))THEN

PRINT number

IF(count % displayperline==0)THEN

PRINTLINE

ENDIF

count🡨count+1

number🡨number+1

ELSE

number🡨number+1

ENDIF

ENDWHILE

END MAIN

METHOD isPrime(num)

BEGIN

IF (num==2) THEN

RETURN true

FOR (divisor🡨2;divisor<=num/2;divisor🡨divisor+1)

IF (num % divisor==0)

RETURN false

ENDIF

ENDFOR

RETURN true

END isPrime

METHOD isPalindrome(num)

BEGIN

k🡨num

test🡨0

WHILE (num!=0)

lastdigit🡨num % 10

test🡨test\*10+lastdigit

num🡨num/10

ENDWHILE

RETURN (k==test)

END isPalindrome

END PalindromePrime