Assignment-2

(1A) convert the time entered in hh, min and sec. into seconds.

I) ~~Stop~~ start

II) Accept hours, mins and seconds from user

III) convert hours to seconds:
Hour_sec = hours * 3600
= 3600

IV) convert mins to seconds.
Mins_sec = min * 60
= 20 * 60 = 1200

V) Add hour_sec, min_sec and sec
Total_sec = hour_sec + min_sec + sec

~~= 3600 + 60 +~~
= 3600 + 1200 + 15 = 4815

VI) print total seconds as output
= 4815

VII) stop

(2) convert temp from celsius to Fahrenheit
(C/5 = (F-32)/9)

I) Start

II) Accept temp. in celsius (c).

III) convert to celsius to Fahrenheit:

$$F = (C \times \frac{9}{5}) + 32$$

$$F = 40$$

IV) Fahrenheit temp.
= 40

V) Stop

(3) convert Distant given in feet and inches into meter and centimeter.

I) Start

II) Accept distant in feet and inchs.

III) convert feet to inches:
total_inches = (feet × 12) + inch

IV) convert inches to centimeters:
cm = total_inches × 2.54

v) convert ~~cehtim~~ centimeters to meters and centimeters

• 1 foot 12 inch
• 1 inch = 2.54cm
• 100 cm = 1meter

• Area of triangle = $\frac{1}{2}$ × base × height
• Area of rectangle = length × breadth

meters = cm // 100
1 meter , 72.72 cm

VI) Stop.

(4) WAP to calculate area of triangle and rectangle.

I) Start

II) Accept base and height of the triangle

III) calculate area of triangle:

triangle-area = 0.5 × base × height
= 0.5 × 10 × 6 = 30

IV) length and breadth of the rectangle.

V) rectangle area of rectangle:

rectangle-area = length × breadth
= 8 × 5
= 40

VI) the Rectangle Area is 40 and triangle Area is 30

VII) Stop.

(5) WAP to calculate selling price of book based on cost price and discount.

I) Start

II) the cost price of the book.

III) The discount percentage

IV) calculate discount amount:

discount_amount = (cost price x Discount) / 100

= 500 x 10 / 100

= 50

V) calculate selling price:

selling_price = cost_price - discount_amount

= 500 - 50

= 450.

VI) The selling price is 450

VII) Stop.

(6) WAP to calculate total salary of employee based on basic, da = 10% of basic ta=12% of basic, hra = 15% of basic.

I] start

II] Accept the basic salary of the employee.

III] calculate = DA = 10% of basic salary

IV] calculate = TA = 12% of basic salary

V] calculate = 15% of basic salary.

VI] Total salary = Basic + DA + TA + HRA.

= 10000 + 1000 + 1200 + 1500

13700

VII] Display DA, TA, HRA and total salary.

DA = 1000
TA = 1200
HRA = 1500
Total salary = 13700

VIII] Stop.

4] Find the sum of three-digit number.

I] Start

II] Enter a three-digit number (say num).

III] Extract the last digit using digit1 = num

= num % 10.

= 452 % 10 = 2

IV] Remove the last digit using num.

= num // 10

= 452 // 10 = 45

V] Extract the second digit using digit2

= num % 10.

= 45 % 10 = 5

VI] Remove the second digit using num

= num // 10

= 45 // 10 = 4

VII] Extract the first digit using digit3 = num.

VIII] calculate sum = digit1 + digit2 + digit3

= 2 + 5 + 4

Sum = 11

VIIII] Display the sum.

Sum = 11

X] Stop.

(8) write a program to swap two numbers using third variable

I] start

II] Accept two numbers a and b

III] Store the value of a in a temporary variable temp.

IV] Assign the value of b to a. = 10

V] Assign the value of temp to b. = 10

VI] Display the swapped values of a and b

a = 10 b = 5

VII] Stop.

(9) WAP to swap two numbers without using third variable.

I] Start

II] Accept two numbers a and b

III] perform swapping using arithmatic operations:

a = a + b , 12 + 25 = 37
b = a - b , 25 - 37 = 12
a = a - b , 37 - 12 = 25
a = 25, b = 12

IV] Display the swapped values of a and b
a = 25 , b = 12

V] Stop

10] WAP to reverse three digit number.

I] Stop

II] Three digit number. num.

III] Extract the last digit → digit1 = num % 10

IV] Remove last digit → num = num // 10

V] Extract the middle digit → num = num % 10

VI] Remove middle digit → num = num // 10

VII] Now digit3 = num (First digit)

VIII] Form reverse number = digit1 * 100 + digit * 10 + digit3

(10) Display the reverse number

Number = 456

1) last = 456 % 10 = 6
2) remaining = 456 // 10 = 45
3) middle = 45 % 10 = 5
4) first = 45 // 10 = 4
5) reverse = last x 100 + middle x 10 + first
= 6 x 100 + 5 x 10 + 4 = 654

(11) WAP to accept an integer amount from user and tell minimum number of notes needed for representing that amount.

I] Start

II] Accept integer amount from the user.

III] available note denominations (2000, 500, 200, 100, 50, 20, 10, 5, 2, 1)

IV] each denomination (starting from highest):

denomination = amount // note

remaining amount = amount % note

v] count total notes.

• amount = 3768

2000 → 3768 // 2000 = 1 (remain 1768)
100 → 68 // 100 = 0 (remain 68)
500 → 1768 // 500 = 3 (remain 268)
200 → 268 // 200 = 1 (remain 68)
50 → 68 // 50 = 1 (remain 18)
20 → 18 // 20 = 0 (remain 18)
10 → 18 // 10 = 1 (remain 8)
5 → 8 // 5 = 1 (remain 3)
2 → 3 // 2 = 1 (remain 1)
1 → 1 // 1 = 1 (remain 0)

2000 x 1, 500 x 3, 200 x 1, 50 x 1, 10 x 1, 5 x 1
2 x 1, 1 x 1

Total notes = 10

VI] Stop.