**Programming Fundamentals**

**Assignment #1**

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Class: Bscs F15 (Morning)

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**Question #1**

T

T

T

A

grade= ‘A-’

If (permaks>=80)

grade= ‘A’

If (permaks>=85)

Ptrint “Total Marks=”,totalmarks, “Average Marks=”, avgmarks, “percentage Marks”, permarks

Input “marks of five subjects”, PF, ITC, CALCU,EMT, ISL

Tatalmarks= PF+ITC+CALCU+EMT+ISL

avgmarks=totalmarks/5

permarks=totalmarks/500\*100

PF=0, ITC=0, CALCU=0, EMT=0, ISL=0,totalmarks=0.avgmarks=0, permarks=0, GPA=0, grade=0, pfgpa=0, itcgpa =0, cagpa=0, Emtgpa=0, islgpa=0

T

T

T

T

T

B

grade= ‘C’

If (permaks>=58)

grade= ‘C+’

If (permaks=>61)

grade= ‘B-’

grade= ‘B’

If (permaks>=65)

If (permaks>=70)

grade= ‘B+’

If (permaks>=75)

A

T

T

T

T

T

B

C

pfgpa=3.3

If (PF>=75)

pfgpa=3.7

If (PF>=80)

pfgpa=4.00

If (PF>=85)

grade= ‘F’

grade= ‘D’

grade= ‘C-’

If (permaks>=50)

If (permaks>=55)

T

T

T

T

T

T

pfgpa=1.0

D

pfgpa=1.0

If (PF>=50)

pfgpa=1.7

If (PF>=55)

pfgpa=2.0

If (PF>=58)

pfgpa=2.3

If (PF>=61)

pfgpa=2.7

pfgpa=3.0

If (PF>=65)

If (PF>=70)

C

T

T

T

T

T

T

E

itcgpa=2.0

If (ITC>=58)

itcgpa=2.3

itcgpa=2.7

If (ITC>=61)

If (ITC>=65)

itcgpa=3.0

If (ITC>=70)

itcgpa=3.3

If (ITC>=75)

itcgpa=3.7

If (ITC>=80)

itcgpa=4.00

If (ITC>=85)

D

If (CALCU>=85)

Itcgpa=0.00

Itcgpa=1.0

cagpa=4.0

If (ITC>=50)

itcgpa=2.0

If (ITC>=55)

E

T

T

T

T

T

E

cagpa=3.0

If (CALCU >=70)

cagpa=3.3

If (CALCU >=75)

If (CALCU >=80)

cagpa=3.7

T

T

T

T

T

F

cagpa=0.0

cagpa=1.0

If (CALCU >=50)

cagpa=1.7

If (CALCU >=55)

cagpa=2.0

If (CALCU >=58)

cagpa=2.3

cagpa=2.7

If (CALCU >=61)

If (CALCU >=65)

E

F

T

T

T

T

T

T

G

If (EMT >=61)

Emtgpa=2.3

Emtgpa=2.7

If (EMT >=65)

Emtgpa=3.3

Emtgpa=3.0

If (EMT >=70)

If (EMT >=75)

Emtgpa=3.7

If (EMT >=80)

If (EMT>=85)

Emtgpa=4.0

T

T

T

T

T

T

H

Islgpa=3.7

If (ISL >=75)

Islgpa=3.7

If (ISL >=80)

Islgpa=4.0

Emtgpa=1.0

If (ISL>=85)

F

Emtgpa=0.0

If (EMT >=50)

Emtgpa=1.7

If (EMT >=55)

Emtgpa=2.0

If (EMT >=58)

G

If (EMT>= 50)

If (EMT >=58)

If (EMT >=55)

H

T

T

T

T

T

Islgpa=1.0

I

Islgpa=3.0

Islgpa=3.0

Islgpa=3.0

Islgpa=3.0

Islgpa=3.0

Islgpa=1.0

Islgpa=1.7

Islgpa=2.0

Islgpa=2.3

Islgpa=2.7

If (ISL >= 50)

If (ISL >=55)

If (ISL >=58)

If (ISL >=61)

If (ISL >=65)

Islgpa=3.0

If (ISL >=70)

H

If (EMT >=80)

If (EMT>=85)

Dry run:

PF=70, ITC=75, CALCU=75, EMT=81, ISL=78

Total marks : 379

Average marks : 75

Percentage : 75

Grade: B+

Gpa : 3.00

Print “Gpa of student is “, Gpa

Gpa =(pfgpa\*3+itcgpa\*3+cagpa\*3+Emtgpa\*4+islgpa\*4)/17

I

I

I

**Question # 2**

Dry run :

2, 4

Condition is true so

2 is factor of 4

4, 3

Condition is false so

4 is factor of 3

4, 7

Condition is false so

4 is factor of 7

numb1=0, numb2=0

F

T

PRINT numb1 “is factor of” numb2

PRINT numb1 “is not factor of” numb2

IF

(numb2%numb1)

= = 0

Input “input two numbers”, numb1, numb2

Question #3

Print “age is” ayear “years” amonth “months” & adays “days”

ayear = pyear -byear

If pmonth<bmonth

aday=pday-bday

If pday<bday

Input “birth year, month, day & present year, month, day

amonth = pmonth - bmonth

pmonth = pmonth + 12

pyear = pyear - 1

amonth = pmonth - bmonth

pday=pday+30

pmonth=pmonth-1

aday=pday-bday

byear=0, bmonth=0, bday=0, pyear=0, pmonth=0, pday=0, ayear=0, amonth=0, aday=0

T

Dry run: Q3

Present:

Year Month Day

2014 10 15

Birth:

2000 8 7

Age:

14 2 8

Present:

Year Month Day

2015 7 22

Birth:

1993 12 25

Age:

21 6 27

Present:

Year Month Day

2015 8 22

Birth:

1996 10 6

Age:

19 10 18

Question #4

Dry run: Q#4

Hour: Minute

4:35

Total minutes: 275

Hour: Minute

3:15

Total minutes: 195

Hour:Minute

10:25

Total minutes: 625

Question #5

Input “input hours and minutes”, hour, mint

totalMint=hour\*60 + mint

Print “total times in minutes is” totalMint

hour=0, mint=0, totalMint=0

Dry run: Q5

Times in 24 hour format:

6

Times in 12 hour format:

6 AM

Times in 24 hour format:

18

Times in 12 hour format:

6 PM

Times in 24 hour format:

12

Times in 12 hour format:

12 AM

Print hour “:”, mint “:”, sec “AM”

Print hour “:”, mint “:”, sec “PM”

Print hour “:”, mint “:”, sec “AM”

If (hour==12)

Print hour “:”, mint “:”,sec “PM”

If (hour==12)

hour= hour-12

hour=0, mint=0, sec=0

T

T

If (hour>12)

Input “ Input time in 24 hour format (hour minute, second )”, hour,mint,sec

Question #6

T

A

B

C

If (meridiem ==P)

Print “time in 24 hour format is”, hour “:”,min “:”,sec

hour=0

If (meridiem ==A)

Input “meridiem(A or P)”, meridiem

Input “hour, minute,seconds”,hour, min, sec

hour=0, min=0, sec=0, meridiem=0

If (hour==12)

C

Print “meridiem is not correct”

A

Print “time in 24 hour format is”, hour “:”, min “:”, sec

hour= hour+12

Print “time in 24 hour format is”, hour “:”, min “:”, sec

B

If (hour==12)

Dry run Q#6

Input times in 12 hours format

Hour minutes seconds Meridiem

12 35 25 P

In 24 hours format:

12:35:25

12 hours format

Hour minutes seconds Meridiem

9 35 25 P

In 24 hours format:

21:35:25

12 hours format

Hour minutes seconds Meridiem

6 35 25 A

In 24 hours format:

6:35:25

Question #7

A

tMin=eMin-sMin

eMin=eMin+60

ehour= ehour-1

tMin=eMin-sMin

If (sMin<eMin)

tSec=eSec-sSec

Esec=eSec+60

eMint= eMin-1

tSec=eSec-sSec

If (eSec<sSec)

Input “startHour, startMinute, startsecond,end hour, endminute,endsecond”,shour, sMin, sSec, ehour, eMin, esec

shour=0, sMin=0, sSec=0, ehour=0, eMin=0, eSec=0, thour=0, tMin=0, tSec=0

A

thour=ehour-shour

Print “task time is”, thour, “:”, tMin “:”, rSec

Dry Run: Q#7

Input

Start time: 8 7 14

End time: 10 15 25

(Output) Task time: 2:8:11

Input:

Start time: 8 7 14

End time: 10 15 25

(Output)Task time: 2:8:11

Input:

Start time: 8 7 14

End time: 10 15 25

(Output)Task time: 2:8:11