كويز ١

جافا ١

Question #1: **What is the output of each code segment?** **[6 pts]**

Note:

- Start on the first line,
- there might be more lines than you need
- use ~ to indicate a space

Segment #1

```
double
~~int~~ x = 4;
double y = 20;

x *= 10+y;
System.out.println(x);
System.out.println();
y = (int)y / 3;
System.out.println(y);
```

Draft /
x = x*(10+y)
= 4.0*(10+20.0)
= 4.0*(30.0)
= 120.0

y = 20/3

memory

x	y
~~4~~ 120	~~20~~ 6

output (1.75)

120.0 ✓ 0.5

✓ 0.5

6.0 ✓ 0.75

Segment #2

```
int num = 1;
double dnum = 3.75;
System.out.print("Hello ");
System.out.print("there!");
System.out.println("++num");
System.out.printf("[%3d]%%",num);
System.out.printf("[%-6.3f]%n",dnum);
```

~~~2 %
~~3, 7 5 0

output (2.25)

Hello ~ there! 2 0.5

→ ~~2 %~3.750

0.5 0.25 1

Segment #3

```
String str = "i like icecream.";
char letter = str.getCharAt(1);
String str2 =
str.replace(letter,'*');

System.out.println(letter);
System.out.println(str2);
```

output (0.5)

~~i~like~icecream~~ ✗ i~like~icecream.

i*like*icecream. ✓ 0.5
~~~

Question #2: Short questions

[4 pts]

1. Write one Java statement to declare a variable named myGPA of type `float` and initialize its value t
4.77

float myGPA = 4.77f;

2. Answer (T)rue or (F)alse:

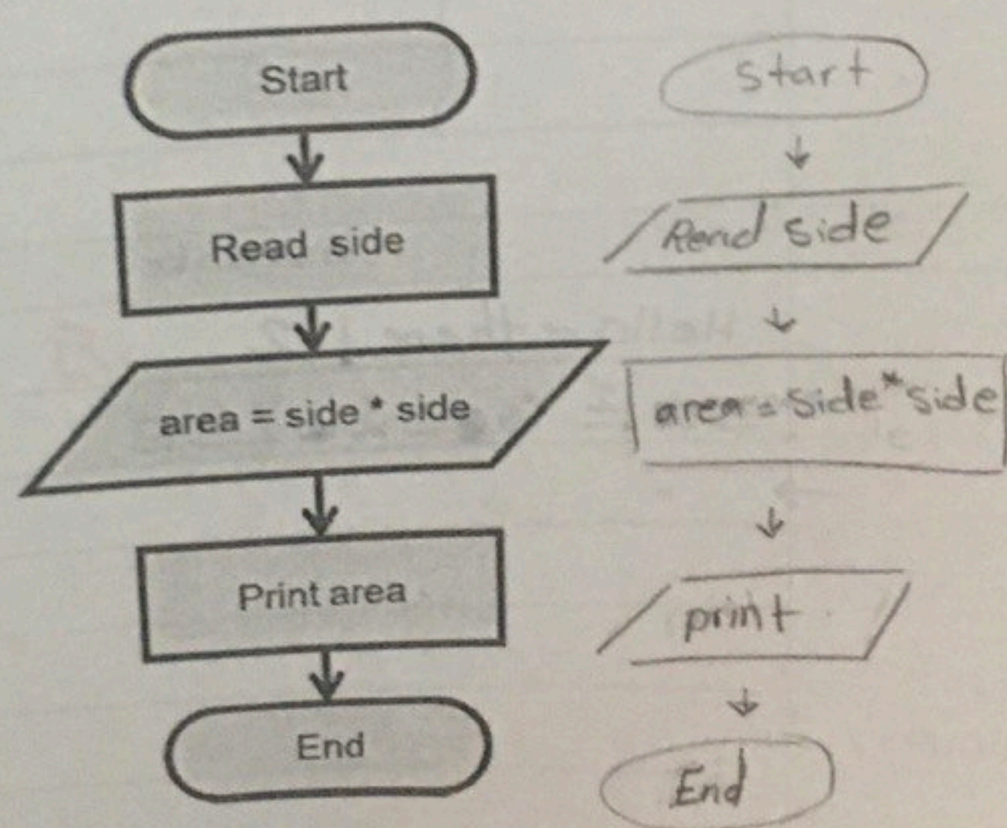
a. (F) The Java Virtual Machine (JVM) converts source code to machine code. Bytecode → machin cod

Fb. (X) If I want to write an algorithm to solve a problem I must know which programming language I will be using.

c. (F) Assume `sum`, `x`, and `y` are integers and are initialized. If I make a mistake and write `sum = x-y;` in place of `sum = x+y;` then I will get a run-time error. logical error

d. (T) `I_am_valid` is a valid identifier in Java.

e. (F) This flowchart has no errors:



ميد ١

جافا ١

[4pts]

1. For each code segment consider the initializations of case#1 and case#2 separately and show the output

code	case#1	case#2
segment #1 2 marks	int x = 6, y = 12, z = 3;	int x = 12, y = 6, z = 3;

if (++x <= y)
if (++x <= z)
System.out.println("Hello");
else
System.out.println("There");
else
if (++y >= z)
System.out.println("Java");
//else
System.out.println("is Fun "+ x);
	There 0.5
	is fun 8
	0.25 0.25
	
	no marks on spacing
		Java 0.5
		is fun 13
		0.25 0.25

code	case#1	case #2

Name:

ID:

	int x = 6,	int x = 12,

segment #2
2 marks
	int x = 6,
	y = 12,
	z = 3;
	x -= y / z + 1;
		int x = 12,
		y = 6,
		z = 3;
		x = y % z++;

switch(x) {
case -1: system.out.print("A");
case 1: system.out.print("B");
case 2: system.out.print("C");
case 3: system.out.print("D");
case 4: system.out.print("E");
default: system.out.println("Z");
}
system.out.println("Done with " + x);
 	
CASE 1
0.25 for going through multiple cases
0.25 even the default Z
 	
0.5 for starting at 1/B (i.e she computed x correct)
OR 0.25 for starting at 3/D or default/Z
OR zero for starting at A or C or E
 	
0.25 for displaying "Done with x"
-0.25 if NOT matching value of x with start cas
	correct:
	6-(12/3+1)
	6-5=1
	
	incorrect:
	6-(12/4) = 3
	(6-12)/3+1 = -1
	6-(12/3)+1 = 3
	BCDEZ
	Done with 1
	
	-0.25 for incorrect line spacing in either case, but no deduction for repeated errors
		correct:
		x= 6%3 =0
		(then z++)
		
		incorrect:
		x=6%4 = 2
		
		Z
		Done with 0
		
		0.5 the default Z
		-0.25 if start at C
		-0.5 if other start
		
		0.25 for displaying "Done with x"
		-0.25 if NOT matching value of x with start

From shatha alzahrani to Everyone
اي

Write some Java statements to do the following:

1. [1 mark] Add an initialization to the declaration of **ch**[Nadia-MG2], by reading from the user. Assume a Scanner **input** has been declared and initialized.

```
char ch = input.next().charAt(0);
```

2. [3.5 marks] Write some statements to print the first and second occurrence of a `letter` in a `sentence`. Assume `sentence` and `letter` are declared and have a value, and that `sentence` has at least one occurrence of the `letter`. Declare variables as needed. Output should be as shown in the example:

```
String sentence = "Time after time";
char letter = 'a';    // or 'e';
```

if `letter` is **a** your code should output: `The letter occurs at 5\-1`

if `letter` is **e** your code should output: `The letter occurs at 3\8`

```
int first = sentence.indexOf(letter);
int second = sentence.indexOf(letter,first+1);
System.out.println("The letter occurs at " +first+ "\\" + second);
```

3.5marks

for first	for second	for output
0.25 type int 0.25 assignment 0.25 object (sentence) 0.25 method indexOf 0.25 param letter (if 2nd param it has to be zero)	0.25 type int 0.25 method indexOf 0.25 param letter 0.25 having a second param 0.25 correct value of second param	0.25 print or println or printf 0.5 correct sentence structure with first and second 0.25 using \\

Name: ID:

Question #1: **True or False (T/F)? Note: consider each point independently.** **(5 pts)**

~~(_T_) A reference variable contains the address of the value it points to~~ [Nadia-MG1]

1. (_F_) The length of any string is always greater than zero.
2. (_F_) The value of a constant can be changed within the program as needed.
3. (_T_) We should not use (==) to compare floating-point variables.
4. (_F_) Any `if` statement can be converted to a statement using the conditional operator.
5. (_T_) We can omit the `else` part to get an `if` statement that takes an action if a boolean expression is `true` but takes no action if the expression is `false`.

Assume you have: `double y = 9.75; int x = (int) y;`

6. (_F_) That casting statement will change the data type of y to integer type within the remainder of the program.
7. (_F_) And the value of x will be 10.

Assume you have: `String str = "University"; String KSU="KSU";`

8. (_F_) Writing ((`str = KSU;`)) will copy "KSU" into the place of "University" in memory
9. (_T_) Writing ((`KSU = str.substring(7,9);`)) will make `KSU="it"`

Assume you have a `scanner` to read input called `in`. The following cause no errors:

10. (_T_) ((`float fnum = in.nextFloat();`)) if the input is: 0.22

Question #2: **Programming:** **[8 pts]**

Write some Java statements to do the following:

1. [1 mark] Add an initialization to the declaration of `ch` [Nadia-MG2], by reading from the user. Assume a Scanner `input` has been declared and initialized.

```
case "dog": system.out.print("Domestic");
            break;
case "Tiger": system.out.print("Wild");
            break;
default: system.out.print("Other");
}
system.out.println(" animal");
```

0.25 for switch
0.25 for (animal)
~~0.25 for { }~~
0.5 for 2 breaks

0.25 for knowing how to write a case and label and colon
1.0 for having 3 cases and default
0.75 for print domestic/wild/other with correct case
0.25 for combining "cat" and "dog" case
0.25 for printing "animal" ~~& 0.25~~ for doing outside switch

Question #3: Short Questions [3 marks]

1. [1 mark] After the execution of this code:

```
int x = 150, y = 22 , z = 0;
if ( x <= y  &&  ++x < 150)
        z = x;
else
        z = y;
```

a. What will be the value of z? ~~Why?~~

z will be 22, ~~because the condition of the if evaluates to false~~ 0.25 for value of z

Paragraph
MyCode myMCQ myTF ¶ Normal Questions Questions... ¶ No Spac... Heading 1 Heading 2 Title
Styles

Question #4: [4pts] **Show the output** [Nadia-MG3]

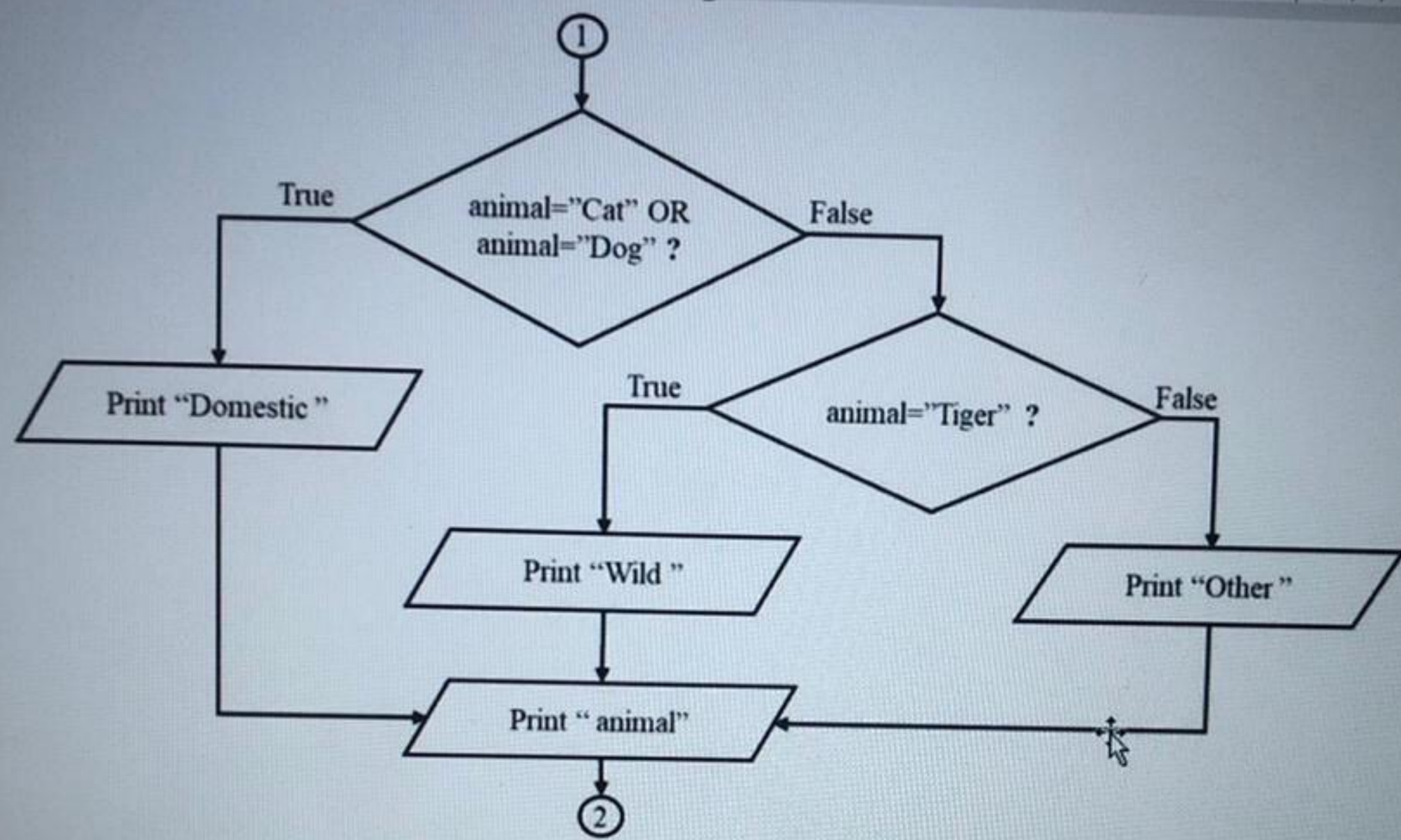
1. For each code segment consider the initializations of case#1 and case#2 separately and show the output

code	case#1	case#2

segment #1
2 marks
	`int x = 6,`
	`y = 12,`
	`z = 3;`
		`int x = 12,`
		`y = 6,`
		`z = 3;`

`if ( ++x <= y )`
`if ( ++x <= z )`
`System.out.println("Hello");`
`else`
`System.out.println("There");`
`else`
`if ( ++y >= z )`
`System.out.println("Java");`
`//else`
`System.out.println("is Fun "+ x);`
	There 0.5
	is fun 8
	0.25 0.25
	
	no marks on spacing
		Java 0.5
		is fun 13
		0.25 0.25

code	**case#1**	**case #2**




```
switch (animal){
case "cat":
case "dog": system.out.print("Domestic");
            break;
case "Tiger": system.out.print("Wild");
            break;
default: system.out.print("Other");
}
system.out.println(" animal");
```

0.25 for switch	0.25 for knowing how to write a case and label and colon
0.25 for (animal)	1.0 for having 3 cases and default
~~0.25 for { }~~	0.75 for print domestic/wild/other with correct case
0.5 for 2 breaks	0.25 for combining "cat" and "dog" case

if she only says: ++x is not executed, she only gets 0.25

2. After the execution of the statements in each case: → 2.0
   a. What will be the value of num?
   b. What will be the value of i?
   c. explain briefly.

case #1	case #2

`int num = 0;`
`int i = 10;`
`i = i * num++;`
	`int num = 0;`
	`int i = 10;`
	`i = i * --num ;`

`num = 1` 0.25 `i = 0` 0.25 0.5 we increment num AFTER we do the multiplication: `i = i * 0;` then `num = num + 1;`	`num = -1` 0.25 `i = -10` 0.25 0.5 we decrement num BEFORE we do the multiplication: `num = num - 1;` then `i = i * -1;`

Question #4: [4pts] **Show the output** [Nadia-MG3]

1. For each code segment consider the initializations of case#1 and case#2 separately and show the output

code	case#1	case#2

segment #1
2 marks
	`int x = 6,`
	`y = 12,`
	`z = 3;`
		`int x = 12,`
		`y = 6,`
		`z = 3;`

`if ( ++x <= y )`
`if ( ++x <= z )`
`System.out.println("Hello");`
`else`
	There 0.5
	is fun 8
	0.25 0.25
		Java 0.5
		is fun 13
		0.25 0.25

كويز ٢

جافا٢

College of Computer and Information Sciences
Department Computer Sciences

جامعة الملك سعود
King Saud University

CSC 111: Computer Programming I — Quiz 2: 2nd Semester - Spring 2020

Date : 15/3/2020 — Time: 12:15-12:55 — Duration : 40 minutes

Name:	Section #:	Total /10
ID:	Serial #:	

Question 1: What is the output of the following program fragments? (3 pts)

`for (System.out.println("HI"); i < 1; i++)` `  System.out.println("HELLO GEEKS");`	a) HI HELLO GEEKS b) No Output c) Compile time error d) HELLO GEEKS
`for (int i = 0;; i++)` `  System.out.println("HELLO GEEKS");`	a) Compile time error b) HELLO GEEKS c) HELLO GEEKS (Infinitely) a) Run-time Exception

`int i = 1;`
`while (i < 9)`
`{`
`  i += 2;`
`  System.out.print(i);`
`}`
	b) 3579
	c) 13579
	d) 1357
	e) 357
	d)

`int y = 0;`
`while(y < 14)`
`{`
`  y++;`
`  for(int i = 1; i < 4; i++)`
`  {`
`  y += i;`
	a) 15
	b) 14
	c) 13
	d) 21

College of Computer and Information Sciences

Department Computer Sciences

King Saud University

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`for (int i = 0;; i++)` `  System.out.println("HELLO GEEKS");`	a) Compile time error b) HELLO GEEKS c) HELLO GEEKS (Infinitely) a) Run-time Exception

`int i = 1;`
`while (i < 9)`
`{`
`  i += 2;`
`  System.out.print(i);`
`}`
	b) 3579
	c) 13579
	d) 1357
	e) 357
	d)

`int y = 0;`
`while(y < 14)`
`{`
`  y++;`
`  for(int i = 1; i < 4; i++)`
`  {`
`  y += i;`
	a) 15
	b) 14
	c) 13
	d) 21

(United States)

Question 2: (2.5 pts)

Write a for loop to find the sum of a Series $(1^1) + (2^2) + (3^3) + (4^4) + (5^5) + \ldots + (n^n)$, find out the sum of the series till n^{th} term.

Examples	
Input	Output
n = 3	14
n = 5	55

`int i;`
`int sums = 0;`
 	
`for (i = 1; i <= n; i++)`
`sums += (i * i);`
	`int i;` → 0.25

	`int sum;` →0.25 & `sum=0;`→ 0.25
	`i = 1` → 0.25 `i <= n` → 0.5 (< → 0.25 & = → 0.25) `i++` → 0.25 `( ; ; )` → 0.25
	`sums +=` → 0.25 `(i * i)` → 0.25

Question 3: (4.5 pts)

Write a do-while loop to counts the number of spaces in a string, then print the result.

`String str="ameera here hello";`
 	
`int c=0;`
`int i=0;`	

	`int c;` →0.25 & `c=0;`→ 0.25
	`int i;` →0.25 & `i=0;`→ 0.25

System.out.println(HELLO GEEKS);	b) HELLO GEEKS c) HELLO GEEKS (Infinitely) a) Run-time Exception

int i = 1;
while (i < 9)
{
i += 2;
System.out.print(i);
}
	b) 3579
	c) 13579
	d) 1357
	e) 357
	d)

int y = 0;
while(y < 14)
{
y++;
for(int i = 1; i < 4; i++)
{
y += i;
}
}
System.out.println(y);
	a) 15
	b) 14
	c) 13
	d) 21

do { System.out.print(1); do { System.out.print(2); } while (false); } while (false);	a) 12 b) 21 c) 1 d) 2

int x = 10;
do
{
x *= 20;
}
while (x < 3);
System.out.println(x);
	a) 10
	b) 200
	c) 2000
	d) 4000

8.	While statement is always consider as counter-controlled loop.	F

Question 2: Write a code segment that do the following: [3 points]

Write a nested for loop to print the following **pattern**:

1 2 3

2 4 6

3 6 9

where n is declared and initialized already, in this example n = 3.

For (int i = 1; i<=n ; i++){
 	
For (j=1; j<= n; j++)
 	
System.out. print(i*j);
System.out.println();
}
	int i; → 0.25 i<=n -> 0.25 i++-> 0.25

	int j; → 0.25 j<=n -> 0.25 j++-> 0.25
	System.out.print -> 0.25 i*j -> 0.5 , if only i ->0.25, if only j-> 0.25
	System.out.println() -> 0.25 Writing the new line statement within outter loop block ->0.25

Question 3: Choose the correct answer [3 points]

ID: Serial #:

Question 1: State wither each statement is true or false **(4 pts)**

1.	while statement and the do-while statement repeat the body of the loop while a boolean expression is true.	T
2.	The do-while statement ex ecutes its body at least once.	T
3.	A variable of type boolean can be used to control a loop statement.	T
4.	It is not allowed to have a for loop within a do while loop	F
5.	A break statement will finish the current iteration and start a new one.	F
6.	If the counter initialized within the parentheses of the for loop (), it is considered as a local variable.	T
7.	If we have a semicolon at the end of the first line of a for statement, we will get an infinite loop.	F
8.	While statement is always consider as counter-controlled loop.	F

Question 2: Write a code segment that do the following: [3 points]

Write a nested for loop to print the following **pattern**:

1 2 3

كويز العملي

جافا ١

Save and Submit

Click **Submit** to complete this assessment.

Question **1** of

Question 1

10 points Save Answer

Write a java program prompt user to enter a string and then print a new string having small letters only of that string.[Use while loop]

Sample Run:

```
Enter String:
LXsmallLX
The new String is small
```

Attach File

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Click **Submit** to complete this assessment.

Question **1** of **1**

Save and Submit

Question Completion Status:

Click **Submit** to complete this assessment.

Question 1 of 1

Question 1

10 points Save Answer

Write a java program prompt user to enter a gander as a char then your program should print "Hello Mr" if the input is M, print "Hello Mrs" if the input is F. Otherwise print "Wrong input".[Use IF statement]

Sample Run:

```
Enter a gender:
F
Hello Mrs..
```

Attach File

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Click **Submit** to complete this assessment.

Question 1 of 1

Save and Submit

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Remaining Time: **19 minutes, 51 seconds.**

Question Completion Status:

Click **Submit** to complete this assessment.

Question **1** of **1**

Question 1

10 points Save Answer

Write a java program prompt user to enter a date as String in the following format (dd-Month). Your program should print the Month only.

Sample Run:

```
Enter Date:
22-July
The Month is July
```

Attach File

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Click **Submit** to complete this assessment.

Question **1** of **1**

Remaining Time: **19 minutes, 53 seconds.**

Question Completion Status:

Click **Submit** to complete this assessment.

Question **1** of **1**

Question 1

10 points Save Answer

Write a java program prompt user to enter a string then count and print the number non-vowel letters. (Vowel letters are: a,e,i,o,u) [Use While loop]

Sample Run:

```
Enter String:
apple
Number of non-vowel letters is 3
```

Attach File

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Click **Submit** to complete this assessment.

Question **1** of **1**

Save and Submit

This test can be saved and resumed later. The timer will continue to run if you leave the test.

Remaining Time: 19 minutes, 53 seconds.

Question Completion Status:

Save and Submit

Click **Submit** to complete this assessment.

Question 1

Question **1** of **1**

10 points Save Answer

Write a java program prompt user to enter an email in the following format (Myname@mail.com). Your program should print only the domain of the email (the part after @).

Sample Run:

```
Enter Email:
Ali@gmail.com
The domain is gmail.com
```

Attach File

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Click **Submit** to complete this assessment.

Question **1** of **1**

Save and Submit

Question 1

Write a java program prompt user to enter a string and then print a new string having small letter
while loop]

Sample Run:

```
Enter String:
LXsmallLX
The new String is small
```

Attach File

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Click **Submit** to complete this assessment.

Question 1

10 points Saved

Write a java program prompt user to enter integer and then print the multiplication table of that number. [Use while loop]

Sample Run:

```
Enter a Number:
4
4 * 1 = 4
4 * 2 = 8
4 * 3 = 12
4 * 4 = 16
```

Selected Answer: Question3.java Remove

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10 points

Save Answer

Write a java program prompt user to enter a date as String in the following format (dd-Month). Your program should print the Month only.

Sample Run:

```
Enter Date:
22-July
The Month is July
```

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Click **Submit** to complete this assessment.

Save and Submit

Remaining Time: **19 minutes, 56 seconds.**

Question Completion Status:

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Click **Submit** to complete this assessment.

Ques

Question 1

10 points Sa

Write a java program prompt user to enter a full name. Your program should print the first name only.

Sample Run:

```
Enter Full Name:
Deema Al-Ahamad
First Name is Deema
```

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Click **Submit** to complete this assessment.

Qu

Save and

Save and Submit

Click **Submit** to complete this assessment.

Question **1** of

Question 1

10 points Save Answer

Write a java program prompt user to enter a string and then print a new string having small letters only of that string.[Use while loop]

Sample Run:

```
Enter String:
LXsmallLX
The new String is small
```

Attach File

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Click **Submit** to complete this assessment.

Question **1** of **1**

Save and Submit

Click **Submit** to complete this assessment.

Question 1

10 points Save Answer

Write a java program prompt user to enter an email in the following format (Myname@mail.com). Your program should print only the domain of the email (the part after @).

Sample Run:

```
Enter Email:
Ali@gmail.com
The domain is gmail.com
```

Attach File

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Save and Submit

Click **Submit** to complete this assessment.

Question **1** of **1**

uestion 1

10 points Save Answer

Write a java program prompt user to enter a gander as a char then your program should print "Hello Mr" if the input is M, print "Hello Mrs" if the input is F. Otherwise print "Wrong input".[Use IF statement]

Sample Run:

```
Enter a gender:
F
Hello Mrs..
```

Attach File

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Click **Submit** to complete this assessment.

Question **1** of **1**

Click **Submit** to complete this assessment.

Question **1** of **1**

Question 1

10 points Save Answer

Write a java program prompt user to enter a gander as a char then your program should print "Hello Mr" if the input is M, print "Hello Mrs" if the input is F. Otherwise print "Wrong input".[Use IF statement]

Sample Run:

```
Enter a gender:
F
Hello Mrs..
```

Attach File

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Remaining Time: **19 minutes, 56 seconds.**

Question Completion Status:

Save an

Click **Submit** to complete this assessment.

Q

Question 1

10 points

Write a java program prompt user to enter 3 integers and then find and print the greatest number among them.[Use IF statement]

Sample Run:

```
Enter First Number
30
Enter Second Number
90
Enter Third Number
12
The greatest number is 90
```

Attach File

Browse My Computer | Browse Content Collection | Browse Dropbox

Click **Submit** to complete this assessment.

Q

Save an

MacBook Air

Question Completion Status:

Save and Submit

Click **Submit** to complete this assessment.

Question **1** of **1**

Question 1

10 points Save Answer

Write a java program prompt user to enter a gander as a char then your program should print "Hello Mr" if the input is M, print "Hello Mrs" if the input is F. Otherwise print "Wrong input".[Use IF statement]

Sample Run:

```
Enter a gender:
F
Hello Mrs..
```

Attach File

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Click **Submit** to complete this assessment.

Question **1** of **1**

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Question **1** of **1**

Question 1

10 points Save Answer

Write a java program prompt user to enter integer and then print the multiplication table of that number. [Use while loop]

Sample Run:

```
Enter a Number:
4
4 * 1 = 4
4 * 2 = 8
4 * 3 = 12
4 * 4 = 16
```

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Question **1** of **1**

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