



FINAL EXAMINATION / PEPERIKSAAN AKHIR
SEMESTER I – SESSION 2020 / 2021 / SEMESTER I – SESI 2020 / 2021
PROGRAM KERJASAMA

COURSE CODE : DDWC2653
KOD KURSUS

COURSE NAME : VB.NET PROGRAMMING
NAMA KURSUS : PENGATURCARAAN VB.NET

YEAR / PROGRAMME : 2 DDWC
TAHUN / PROGRAM

DURATION : 3 HOURS (INCLUDING SUBMISSION HOUR)
TEMPOH : 3 JAM (TERMASUK MASA PENGHANTARAN)

DATE : NOVEMBER 2020
TARIKH : NOVEMBER 2020

INSTRUCTION / ARAHAN:

1. The question paper consists of **4 PARTS**: A, B, C and D.
Kertas soalan terdiri daripada 4 BAHAGIAN: A, B, C dan D.
2. Answer **ALL** questions and write your answers on the answer sheet.
Jawab SEMUA soalan dan tulis jawapan anda pada kertas jawapan.
3. Write your name, matric no., identity card no., course code, course name, section no. and lecturer's name on the first page (in the upper left corner) and every page thereafter on the answer sheet.
Tulis nama anda, no. matrik, no. kad pengenalan, kod kursus, nama kursus, no. seksyen dan nama pensyarah pada muka surat pertama (penjuru kiri atas) kertas jawapan dan pada setiap muka surat jawapan.
4. Each answer sheet must have a page number written at the bottom right corner.
Setiap helai kertas jawapan mesti ditulis nombor muka surat pada bahagian bawah penjuru kanan.
5. Answers should be handwritten, neat and clear.
Jawapan hendaklah ditulis tangan, kemas dan jelas menggunakan huruf cerai.

WARNING / AMARAN

Students caught copying / cheating during the examination will be liable for disciplinary actions and the faculty may recommend the student to be expelled from sitting for exam.
Pelajar yang ditangkap meniru / menipu semasa peperiksaan akan dikenakan tindakan disiplin dan pihak fakulti boleh mengesyorkan pelajar diusir dari menduduki peperiksaan.

ONLINE EXAMINATION RULES AND REGULATIONS
PERATURAN PEPERIKSAAN SECARA DALAM TALIAN

1. Student must carefully listen and follow instructions provided by invigilator.
Pelajar mesti mendengar dan mengikuti arahan yang diberikan oleh pengawas peperiksaan dengan teliti.
2. Student is allowed to start examination only after confirmation of invigilator if all needed conditions are implemented.
Pelajar dibenarkan memulakan peperiksaan hanya setelah pengesahan pengawas peperiksaan sekiranya semua syarat yang diperlukan telah dilaksanakan.
3. During all examination session student has to ensure, that he is alone in the room.
Semasa semua sesi peperiksaan pelajar harus memastikan bahawa dia bersendirian di dalam bilik.
4. During all examination session student is not allowed to use any other devices, applications except other sites permitted by course lecturer.
Sepanjang sesi peperiksaan pelajar tidak dibenarkan menggunakan peranti dan aplikasi lain kecuali yang dibenarkan oleh pensyarah kursus.
5. After completing the exam student must inform invigilator via the set communication platform (eg. WhatsApp etc.) about completion of exam and after invigilator's confirmation leave examination session.
Selepas peperiksaan selesai, pelajar mesti memaklumkan kepada pengawas peperiksaan melalui platform komunikasi yang ditetapkan (contoh: Whatsapp dan lain-lain) mengenai peperiksaan yang telah selesai dan meninggalkan sesi peperiksaan selepas mendapat pengesahan daripada pengawas peperiksaan.
6. Any technical issues in submitting answers online have to be informed to respective lecturer within the given 30 minutes. Request for re-examination or appeal will not be entertain if complains are not made by students to their lecturers within the given 30 minutes.
Sebarang masalah teknikal dalam menghantar jawapan secara dalam talian perlu dimaklumkan kepada pensyarah masing-masing dalam masa 30 minit yang diberikan. Permintaan untuk pemeriksaan semula atau rayuan tidak akan dilayan sekiranya aduan tidak dibuat oleh pelajar kepada pensyarah mereka dalam masa 30 minit yang diberikan.
7. During online examination, the integrity and honesty of the student is also tested. At any circumstances student is not allowed to cheat during examination session. If any kind of cheating behaviour is observed, UTM have a right to follow related terms and provisions stated in the respective Academic Regulations and apply needed measures.
Semasa peperiksaan dalam talian, integriti dan kejujuran pelajar juga diuji. Walau apa pun keadaan pelajar tidak dibenarkan menipu semasa sesi peperiksaan. Sekiranya terdapat sebarang salah laku, UTM berhak untuk mengikuti terma yang dinyatakan dalam Peraturan Akademik.

SECTION A: MATCHING QUESTION [10 MARKS]

BAHAGIAN A: SOALAN PADANAN [10 MARKAH]

Instruction: Answer your question by matching the question statement number to the answer option.

Arahan: Jawab soalan dengan memadankan nombor pernyataan soalan dengan pilihan jawapan.

	Questions	Match with the Answers below:
1	A series of objects or an object that can contain a series of objects has properties and methods	A. Array
2	A series of variables, each individual element can be referenced by its index position.	B. Binding Source
3	It does all the work of passing data back and forth between a data source and a program.	C. Element
4	This object's establishes a link from a specific file or database to your program.	D. Hide Method
5	Zero-based number used to reference the specific elements in the array.	E. Collection
6	Individual item in the array	F. Subscript
7	Lower Subscript, 0 by default	G. Table Adapter
8	This method creates a form object from the specified class and displays it modelessly.	H. Boundaries
9	Choosing this form's method sets the form's Visible property to False and keeps the form instance in memory.	I. Show Method
10	Memory locations that hold data that cannot be changed during project execution.	J. Name Constant

Answer/Jawapan:

Question Statement/Penyataan Soalan	Match to answer number:
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

SECTION B: OBJECTIVE [20 MARKS]

BAHAGIAN B: OBJEKTIF [20 MARKAH]

Instruction: Write the correct answer in the box given in page 4.

Arahan: Tuliskan jawapan yang paling tepat di dalam kotak di mukasurat 4.

1. Three-step process when writing a Visual Basic application is as below, **EXCEPT:**
*Tiga langkah proses dalam menulis aplikasi Visual Basic adalah seperti di bawah, **KECUALI:***
 - A. Write the Basic code / *Tulis kod Asas.*
 - B. Define User Interface / *Mengenalpasti Antaramuka Pengguna.*
 - C. Set the Elements / *Menetapkan elemen-elemen.*
 - D. Set the Properties / *Menetapkan Ciri-Ciri.*
2. Which of the following is **NOT** comparison operator?
*Yang manakah antara berikut **BUKAN** operator perbandingan?*
 - A. &
 - B. >
 - C. <>
 - D. =
3. _____ will be the result of: **MessageText.Text = MessageText.Text.ToLower()** when the value of MessageText.Text is "Visual Basic is fun!".
*_____ adalah hasil dari : **MessageText.Text = MessageText.Text.ToLower()** apabila nilai MessageText.Text adalah "Visual Basic is fun!"*
 - A. Visual Basic is fun!
 - B. VISUAL BASIC IS FUN!
 - C. visual basic is fun!
 - D. VisualBasicisfun!
4. To the user, the user interface should be as follows, **EXCEPT:**
*Bagi pengguna, antaramuka pengguna seharusnya seperti di bawah, **KECUALI:***
 - A. Familiar / *Mudah dikenali*
 - B. Organize / *Teratur*
 - C. Comfortable / *Selesa*
 - D. Ergonomic / *Ergonomik*
5. One control on a Form always has the focus, **EXCEPT:**
*Satu kawalan ke atas Form sentiasa mempunyai fokus, **KECUALI:***
 - A. Text Boxes and Lines / *Kekotak teks dan garisan*
 - B. Text Boxes and Buttons / *Kekotak teks dan butang*
 - C. Text Boxes and Pictures / *Kekotak teks dan gambar*
 - D. Picture Boxes and Labels / *Kekotak gambar dan label*

6. Professional applications use a(n) _____ to tell the user that the program is loading and starting.
Aplikasi profesional menggunakan _____ untuk memberitahu pengguna program sedang dan akan bermula.
- A) Showdialog form
 - B) About box
 - C) Startup form
 - D) Splash screen
7. The _____ is available in most Windows programs and usually information about the program version as well as the company name.
_____ sentiasa ada dalam kebanyakan program Windows dan maklumat kebiasaan mengenai versi program begitu juga dengan nama syarikat.
- A) About form
 - B) Startup box
 - C) Logn form
 - D) Main screen
8. In a project with multiple forms, the _____ form is the first form loaded into the computer's memory and displayed on the desktop.
Di dalam projek yang menggunakan pelbagai borang, _____ borang merupakan yang pertama dimuatnaik ke dalam memori computer dipaparkan di desktop.
- A) Startup
 - B) Splash Screen
 - C) Default
 - D) Main screen
9. Which statement that can removes the specified item from a list?
Penyataan yang manakah yang mengeluarkan item tertentu keluar dari senarai?
- A) Items.Insert method
 - B) Items.Remove method
 - C) Items.RemoveAt method
 - D) Items.Clear method
10. Which property of a list box and combo box that specifies that the list items should be sorted.
Properti kekotak senarai dan kekotak kombo yang manakah akan menentukan senarai item perlu diisihkan.
- A) Items.Count property
 - B) Sorted property
 - C) Item property
 - D) SelectedIndex property

SECTION C: STRUCTURE [40 MARKS]

BAHAGIAN C: STRUKTUR [40 MARKAH]

Instruction: Write your answers in the spaces provided in this questions paper.

Arahan: Tuliskan jawapan di ruang yang disediakan di dalam kertas soalan ini.

QUESTION 1 / SOALAN 1

Write a Visual Basic statement for:

Tulis pernyataan Visual Basic untuk:

- a. Declare a variable named **weightDouble** of double type. **[3M]**
*Isytihar pembolehubah bernama **weightDouble** berjenis double.*

- b. Declare a variable named **StaffIDString** of string type. **[2M]**
*Isytihar pembolehubah bernama **StaffIDString** berjenis string.*

- c. Read the value from **PriceTagTextBox** and assign it to variable **PriceTagDouble**. **[3M]**
*Baca nilai daripada **PriceTagTextBox** dan umpukkan kepada pembolehubah **PriceTagDouble**.*

- d. Read the value from **SumTextBox** and assign it to variable **SumString**. **[3M]**
*Baca nilai daripada **SumTextBox** dan mengumpukkannya kepada pembolehubah **SumString**.*

QUESTION 2 / SOALAN 2

- a. Distinguish the single-dimension array and multi-dimensional array. **[4M]**
Bezakan diantara array dimensi tunggal dan array dimensi pelbagai.

- b. Draw an example that shows the difference of single dimensional array and multi-dimensional array. **[6M]**
Lukiskan contoh yang menunjukkan susunan array dimensi tunggal dan array dimensi pelbagai adalah berbeza.

QUESTION 3 / SOALAN 3

- a) Assume that VarA = 12, VarB = 7, and VarC = 5. What will be displayed for each of the following statements? **[6M]**

Anggap VarA = 12, VarB = 7, dan VarC = 5. Apakah yang akan dipamerkan untuk setiap pernyataan di bawah?

i)

```
If VarA > VarC Then
    VarARadioButton.Checked = True
Else
    VarARadioButton.Checked = False
End If
```

ii)

```
If VarA > VarB + VarC Then
    ResultTextBox.Text = "Its Variable A"
Else
    ResultTextBox.Text = "Its Variable B & C"
End If
```

iii)

```
If VarC > VarB And VarA <> 0 Or VarB = 0 Then
    ResultTextBox.Text = "Its True"
Else
    ResultTextBox.Text = "Its False"
End If
```

- b) Based on the Table below, write the proper statement for each value in the text box. **[3M]**

Berdasarkan Jadual di bawah, tuliskan pernyataan yang sesuai untuk nilai dalam setiap kekotak teks.

NameTextBox.Text Value: <i>Nilai NameTextBox.Text:</i>	Change the value to: <i>Tukarkan nilai kepada:</i>	Answer (Write the statement): <i>Jawapan (Tuliskan pernyataan):</i>
WelCome	Upper Case	
MEETING	Upper Case	
WILLOW	Lower Case	
SUmMER	Lower Case	

QUESTION 4 / SOALAN 4

- a) Indicate whether each of the following identifiers conforms to the rules of Basic and to the naming conventions. If the identifier is invalid, give the reason. **[4M]**

Kenalpasti samaada setiap pengecam di bawah mengikut panduan asas dan mengikut himpunan penamaan. Sekiranya pengecam tersebut tidak sah, berikan sebab.

Identifiers Pengecam	(Answer: Valid or Invalid) (Jawapan: Sah atau tidak sah)	Reasons for Invalid Identifiers Sebab mengapa Pengecam tidak sah
form		
Number.Listing.Integer		
AmountDecimal\$		

QUESTION 5 / SOALAN 5

For each of these situations, write the declaration statement and tell where it should appear. Assume the project will have multiple forms. **[6M]**

- a) The number of calories in a gram of fat (5) to use in the calculations of a procedure.

Answers / Jawapan:

- b) The name of the person with the highest score, which will be determined on one procedure and displayed in a label on a different form. (The value must be retained for multiple executions of the procedure.)

Answers / Jawapan:

- c) The name of the company ("Bob's Printing Service"), which will appear in several forms.

Answers / Jawapan:

- d) A count of the number of persons entered using a single form. The count will be used to help calculate an average in a second form.

Answers / Jawapan:

SECTION D: 2 QUESTIONS [30 MARKS]

BAHAGIAN D: 2 SOALAN [30 MARKAH]

QUESTION 1 / SOALAN 1

You are required to develop a program based on the following specification:-

Anda dikehendaki menulis satu aturcara berdasarkan spesifikasi berikut:-

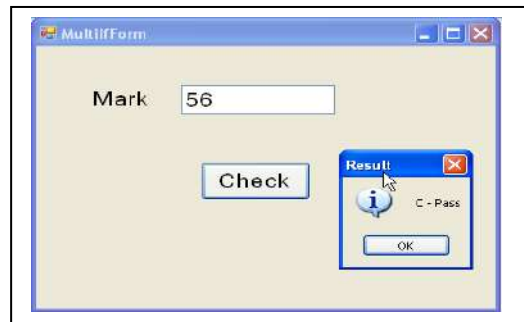
Write a complete program for the following program specification. The program will enable user to enter exam mark. When the user click the **Check** button, the program will determine then display using a message box the suitable result based on the following table:- **[12M]**

*Tuliskan satu aturcara penuh berdasarkan spesifikasi aturcara berikut. Aturcara akan membolehkan pengguna memasukkan markah peperiksaan. Apabila pengguna klik **Check**, aturcara akan menentukan dan memaparkan menggunakan kotak mesej keputusan yang sesuai berdasarkan jadual berikut:-*

Marks	Result
< 40	D - FAIL
>= 40 and < 60	C - PASS
>=60 and <80	B - PASS
>= 80 and <=100	A - PASS

The following is the sample output:

Berikut adalah contoh output:



Using Try.. Catch.. statements, your program must check for invalid input such as a negative marks, marks value greater than 100 or non-numeric input. Suitable error message should be displayed for these invalid input.

Menggunakan pernyataan Try.. Catch.., aturcara anda mesti menyemak nilai yang tidak sah seperti markah negatif, markah lebih dari 100 atau input bukan nombor. Mesej ralat yang sesuai mesti dipaparkan bagi ralat-ralat data tersebut.

You **MUST** use the following names for the control in your code:

[3M]

*Anda **MESTI** menggunakan nama-nama berikut untuk kawalan di dalam kod aturcara anda:*

Text box - markTextBox

Button - checkButton

QUESTION 2 / SOALAN 2

Create a VB.NET project that calculates the total of fat, carbohydrate, and protein calories. Allow the user to enter (in text boxes) the grams of fat, the grams of carbohydrates, and the grams of protein. Each gram of fat is nine calories; a gram of protein or carbohydrate is four calories. Display the total calories for the current food item in a text box. Use two other text boxes to display an accumulated sum of the calories and a count of the items entered. **[9M]**

Form: The form should have three text boxes for the user to enter the grams for each category. Include labels next to each text box indicating what the user is to enter. **[2M]**

Include buttons to Calculate, to Clear the text boxes, to Print the Form and to Exit. **[2M]**

Make the form's Text Property "Calories Counter". **[2M]**

Bina sebuah projek VB.NET untuk membuat pengiraan jumlah lemak, karbohidrat, dan kalori protein. membenarkan pengguna memasukkan lemak (gram) di dalam kekotak teks. Setiap lemak (gram) adalah sembilan kalori; satu gram protein atau karbohidrat adalah empat kalori. Paparkan jumlah keseluruhan kalori untuk item makanan sedia ada di dalam kekotak teks. Gunakan dua kekotak teks untuk memaparkan jumlah yang terkumpul kalori dan bilangan item yang dimasukkan.

Borang: Borang seharusnya mempunyai tiga kekotak teks untuk pengguna memasukkan grams untuk setiap kategori. Masukkan label disebelah setiap kekotak teks untuk menyatakan data yang perlu dimasukkan oleh pengguna.

Masukkan butang untuk mengira, membersihkan kekotak teks, mencetak boring dan keluar.

Buatkan Properti Teks Borang tersebut sebagai "Calories Counter".