Universiti Malaysia PAHANG	COURSE NAME: PROGRAMMING TECHNIQUE		COURSE CODE BCI1023/DCI1023	/90
	ASSESSMENT: HOT 2(15%)			
	LECTURER:			
	DATE & TIME : 15 January 2021 10.00 AM 12.00 PM			
STUDENT'S INFORMATION				
NAME				
STUDENT ID		SECTION		

MARKING SCHEME/RUBRICS

CO1 Demonstrate various techniques in solving a problem (5%)		**Full Marks**	**Marks Given**
1.1 Correct and relevant use of variables (input, process and output)		3	
1.2 Correct and relevant use of variable of array (input, process and output)		9	
1.3 Correct flow of control statements (selection)		3	
1.4 Correct flow of control statements (looping)		3	
1.5 Correct use of arithmetic equations		3	
1.6 Correct use of function elements (function declarations, function definitions and calling functions)		9	
TOTAL CO1		**30**	
CO2 Construct and runs programs (10%)		**Full Marks**	**Marks Given**
Input			
2 Apply appropriate input using array variables and statement relevant to the problem	2.1 Initialization : Apply appropriate name and type variables	3	
	2.2 Input Format : Apply appropriate format for input data (scanf, gets etc)	3	
	2.3 Input statements : Follow logical looping to enter input data *Driver name, ic no, vehivle no, summon amount, date of summon issued and no of days late*	6	
Process			
3 Process for *Calculating the total summon payment*	3.1 Appropriate application of selection statement to determine the discount percentage – pay within 5 days	3	
	3.2 Appropriate application of selection statement to determine the penalty charged	8	
4 The usage of modular programming in formulating the calculation or any related process.	4.1 Function #1 : Appropriate declaration of function (function prototype), function definition, calling a function (passing parameter), return value.	4	
	4.2 Function #2 : Appropriate declaration of function (function prototype), function definition, calling a function (passing parameter), return value.	12	
	4.3 Function #3 : Appropriate declaration of function (function prototype), function definition, calling a function.	5	
5. Process for *Overall Information*	5.1 Correct formula to calculate the (i) Summon, (ii) Discount and (iii) Penalty	9	
Output			
6. Overall program structure	6.1 Format/Indentation	1	
	6.2 Comments	1	
	6.3 Error-free program	5	
TOTAL CO2		**60**	

INSTRUCTIONS

- This is open-book test.
- This HOT will carry out **15%** of your final marks
- This test paper has 1 (ONE) question with four (4) pages.
- Accomplish this question individually. You neither allowed to discuss with your classmate or anyone else nor use any tools to exchange or transfer the answer. Any attempt to do so will be considered cheating, resulting in you to getting 0 marks.
- Estimation Time to complete the answer of this test: 2 Hours
- Full marks for this HOT is 90 marks.
- Your program must be running properly (free from error, whether or not you able to answer the whole question)

SUBMISSION

i. Save your program as, for example, **HOT02_CA12345.c.** For those who do not have a laptop, write the code on paper, snap the clear picture of it.

ii. Send your .c file to KALAM/Google Form into your respective section folder. Submission will be **closed by 12 PM on 15 January 2021**.

ANY PLAGIARISM 50% DETECTED, ZERO (0) MARK WILL BE GIVEN
(Code similarity checker will be used)

QUESTION

Design a C program to calculate the total payment for the parking summons issued by Majlis Perbandaran Kuantan (MPK). The user needs to pay the summon within 5 days. There will be a 10% discount if user pay the summon within 5 days. After 5 days, a penalty will be charge to the user. For each week (7 days), if user fail to pay the summon, 10% will be charge. For example, if a user were fined RM50 for parking and pay after 5 days, the total payment needs to be paid will be RM55. Meanwhile, if the user pay summon in week 2 after the due date, another 10% will be charged and that makes it become 20% from the amount of summon. The amount of the penalty will be increasing every week until the penalty reaches 50%. Figure 1 and Figure 2 give sample the output. The description of your program is as follows:

- Create main function to enter the detail of the driver such as name, id no, vehicle no, date of summon issued and no of days late.
- A function to enter the summon amount.
- A function to calculate the summon amount that need to be paid.
- A function to print the payment information.

Based on the given situation, develop a complete C program.

```
Enter driver name : Jefry
Enter id no : 890912065543
Enter vehicle no : CCS2344
Summon amount (in RM) : 50
Date of summon issued : 28 October 2020
The summon need to be paid within 5 days from date of summon
issued.
No of days late : 0

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Payment Information
==================
Name                    : Jefry
ID No                   : 890912065543
Vehicle No              : CCS2344
Total Summon            : RM45.00
Discount                : RM5.00
Total amount of penalty : RM0.00
```

Figure 1. Sample of the Output

```
Enter driver name : Jefry
Enter id no : 890912065543
Enter vehicle no : CCS2344
Summon amount (in RM) : 50
Date of summon issued : 1 October 2020
The summon need to be paid within 5 days from date of summon
issued.
No of days late : 25

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Payment Information
===================
Name                      : Jefry
ID No                     : 890912065543
Vehicle No                : CCS2344
Total Summon              : RM 65.00
Discount                  : RM0.00
Total amount of penalty : RM15.00
```

Figure 2. Sample of the Output

PLEASE REFER TO THE MARKING SCHEME/RUBRICS AS A GUIDE IN COMPLETING THE SOLUTION

END OF QUESTION