



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2023/2024**

- COURSE NAME : COMPUTER PROGRAMMING
- COURSE CODE : BIT 10303
- PROGRAMME CODE : BIT
- EXAMINATION DATE : JULY 2024
- DURATION : 3 HOURS
- INSTRUCTIONS :
1. ANSWER ALL QUESTIONS
 2. THIS FINAL EXAMINATION IS CONDUCTED VIA
 - Open book
 - Closed book
 3. STUDENTS ARE **PROHIBITED** TO CONSULT THEIR OWN MATERIAL OR ANY EXTERNAL RESOURCES DURING THE EXAMINATION CONDUCTED VIA CLOSED BOOK

THIS QUESTION PAPER CONSISTS OF SIX (6) PAGES

Q1 Write a complete program to display name according to first letter of the day as shown in **Table Q1.1**. Program **MUST** implement by `switch ... case` statement and should able to produce the program as shown in **Figure Q1.1** and **Figure Q1.2**. Note that **Figure Q1.1** is output example for correct input and **Figure Q1.2** is output example for wrong input. The bold and underline value is sample input by user during program run time.

Table Q1.1 Days of the week

First letter	Display on screen / Output
S/s	Sunday
M/m	Monday
T/t	Tuesday
W/w	Wednesday
H/h	Thursday
F/f	Friday
A/a	Saturday
Other	Wrong input

```
Enter first word of the day (S/s,M/m,T/t,W/w,H/h,F/f,A/a) > F
Friday
```

Figure Q1.1

```
Enter first word of the day (S/s,M/m,T/t,W/w,H/h,F/f,A/a) > K
Wrong input
```

Figure Q1.2

(25 marks)

Q2 Write a complete program that report the total number of rainy days for each month in a year. Your program should able to perform the following tasks:

- Prompt user to enter the total rainy days for each month in a year
- By using array
 - Read the total rainy days for each month in a year
 - Calculate the total rainy days in a year
 - Display total rainy days in a year

Your program should able to produce the program as shown in **Figure Q2.1**. Note that **Figure Q2.1** is example and the bold and underline value is sample input by user during program run time.

(20 marks)



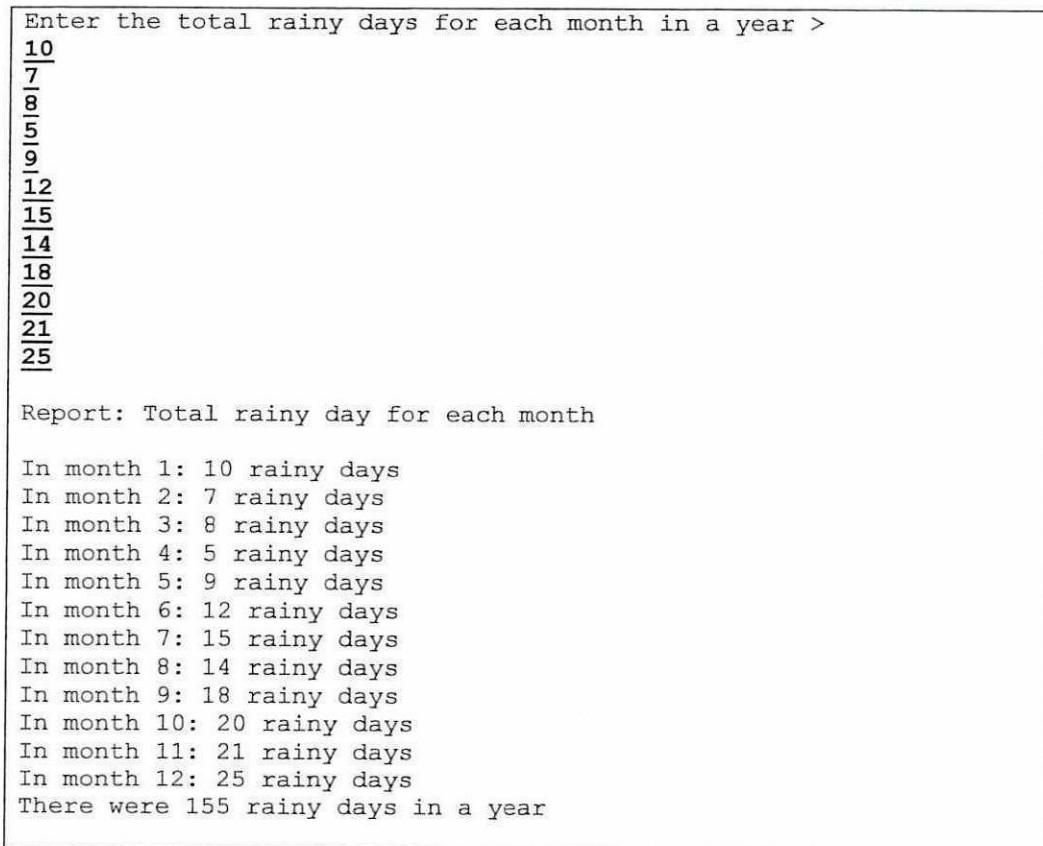


Figure Q2.1

TERBUKA

Q3 Based on **Figure Q3.1** and input data in **Table Q3.1**, write the program output.

```
#include <stdio.h>
#include <string.h>

int main(){
    struct students{
        char name[25];
        int age;
        float average;
    } student1,student2;

    printf("What is first student's name? ");
    gets(student1.name);
    printf("What is the first student's age? ");
    scanf("%d",&student1.age);
    printf("What is the first student's average? ");
    scanf("%f",&student1.average);

    fflush(stdin);

    printf("\nWhat is the second student's name? ");
    gets(student2.name);
    printf("What is the second student's age? ");
    scanf("%d",&student2.age);
    printf("What is the second student's average? ");
    scanf("%f",&student2.average);

    printf("\n\nHere is the student information you entered:\n\n");
    printf("Student #1:\n");
    printf("Name:      %s\n",student1.name);
    printf("Age:        %d\n",student1.age);
    printf("Average :  %.1f\n",student1.average);

    printf("\nStudent #2:\n");
    printf ("Name:      %s\n",student2.name);
    printf("Age:          %d\n",student2.age);
    printf("Average :  %.1f",student2.average);
}
```

Figure Q3.1

Table Q3.1 Students information

Student	Name	Age	Average
1	Joe Sanders	13	78.4
2	Mary Reynolds	12	98.9

(15 marks)

Q4 Based on **Figure Q4.1**, write the appropriate C code according to given instruction.

```
#include <stdio.h>

int main(){

    int myAge;
    x1  =&myAge; //1

    myAge = 8;

    printf("Value myAge %d ", x2 ); //2

    printf("\nValue myAge from pointer %d ", x3 ); //3

    printf("\nAddress of myAge %p", x4 ); //4

    x5  //5

    printf("\nAddress of myAge %p",&myAge);
    printf("\nValue myAge %d ",myAge);
    printf("\nValue myAge from pointer %d ",*ptr);
}
```

Figure Q4.1

- (a) Create a pointer variable called `ptr` shown in `x1`, that points to the `int` variable `myAge`. (2 marks)
- (b) Display the value of the variable `myAge` in `x2`. (2 marks)
- (c) Display the value of the variable `myAge` using the pointer `ptr` in `x3`. (2 marks)
- (d) Display the address of `myAge` in `x4`. (2 marks)
- (e) Change value of variable `myAge` into 10 using pointer `ptr` in `x5`. (2 mark)

- Q5** Based on **Figure Q5.1**, write the function definition program code for `max()` function that receive **TWO (2)** integer value and return the maximum value to `main()` function.

```
#include <stdio.h>

int main(){
    int a=7,b=15;
    printf("Maximum value is : %d",max(a,b));
}
```

Figure Q5.1

(10 marks)

- END OF QUESTIONS -