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Practical 04 – CS102.3

Question 1

```
#include <stdio.h>

int main()
{
    int num;

    printf("Enter a number: ");

    scanf("%d",&num);

    if (num%2==0)

        printf("This number is an even number");

    else

        printf("This number is an odd number");

    return 0;
}
```

By using switch statement

```
#include <stdio.h>

int main()
{
    int num;

    printf("Enter a number: ");

    scanf("%d", &num);

    switch (num%2)
    {
        case 0:

            printf("This number is an even number");
```

```
        break;
    case 1:
        printf("This number is an odd number");
        break;
    default:
        printf("Invalid input");
        break;
}
return 0;
}
```

Question 2

```
#include <stdio.h>

int main()
{
    int choice;
    float num1, num2, result;
    printf("Menu Driven Calculator\n");
    printf("1. Addition\n");
    printf("2. Subtraction\n");
    printf("3. Division\n");
    printf("4. Multiplication\n");
    printf("Enter your choice (1-4): ");
    scanf("%d", &choice);
    printf("Enter first number: ");
    scanf("%f", &num1);
    printf("Enter second number: ");
```

```
scanf("%f", &num2);
switch (choice)
{
    case 1:
        result = num1 + num2;
        printf("The result of addition is: %.2f\n", result);
        break;
    case 2:
        result = num1 - num2;
        printf("The result of subtraction is: %.2f\n", result);
        break;
    case 3:
        if (num2 != 0)
        {
            result = num1 / num2;
            printf("The result of division is: %.2f\n", result);
        }
        else
        {
            printf("Error: Division by zero is not allowed.\n");
        }
        break;
    case 4:
        result = num1 * num2;
        printf("The result of multiplication is: %.2f\n", result);
        break;
    default:
```

```
        printf("Invalid choice.\n");
        break;
    }
    return 0;
}
```

Question 3

```
#include <stdio.h>

int main()
{
    int choice;
    float radius, result;
    printf("Menu:\n");
    printf("1. Calculate the circumference of a circle\n");
    printf("2. Calculate the area of a circle\n");
    printf("3. Calculate the volume of a sphere\n");
    printf("Enter your choice (1-3): ");
    scanf("%d", &choice);
    printf("Enter the radius: ");
    scanf("%f", &radius);
    switch (choice)
    {
        case 1:
            result = 2 * 3.14159 * radius;
            printf("The circumference of the circle is: %.2f\n", result);
            break;
        case 2:
```

```
    result = 3.14159 * radius * radius;

    printf("The area of the circle is: %.2f\n", result);

    break;

case 3:

    result = (4.0 / 3.0) * 3.14159 * radius * radius * radius;

    printf("The volume of the sphere is: %.2f\n", result);

    break;

default:

    printf("Invalid choice.\n");

    break;

}

return 0;

}
```

Question 4

```
#include <stdio.h>

int main()

{

    char letter;

    printf("Enter a letter: ");

    scanf(" %c", &letter);

    switch (letter)

    {

        case 'a':

        case 'A':

        case 'e':

        case 'E':
```

```
    case 'i':
    case 'I':
    case 'o':
    case 'O':
    case 'u':
    case 'U':
        printf("%c is a vowel.\n", letter);
        break;
    default:
        printf("%c is not a vowel.\n", letter);
        break;
}
return 0;
}
```

Question 5

```
#include <stdio.h>

int main()
{
    int month, days;
    printf("Enter the month number: ");
    scanf("%d", &month);
    switch (month)
    {
        case 1: // January
        case 3: // March
        case 5: // May
```

```
case 7: // July
case 8: // August
case 10: // October
case 12: // December
    days = 31;
    break;
case 4: // April
case 6: // June
case 9: // September
case 11: // November
    days = 30;
    break;
case 2: // February
    days = 28;
    break;
default:
    printf("Invalid month number.\n");
    return 0;
}
printf("Total number of days in month %d is %d.\n", month, days);
return 0;
}
```