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**Practical no:- 04**

**Question 1**

#include <stdio.h>

int main() {

int number;

printf("Enter an integer: ");

scanf("%d", &number);

if (number % 2 == 0) {

printf("The number is even.");

} else {

printf("The number is odd.");

}

return 0;

}

**Rewritten using a switch statement:**

#include <stdio.h>

int main() {

int number;

printf("Enter an integer: ");

scanf("%d", &number);

switch (number % 2) {

case 0:

printf("The number is even.");

break;

case 1: printf("The number is odd."); break;

default:

printf("The number is neither even nor odd.");

}

return 0;

}

**Question 2**

#include <stdio.h>

int main() {

int choice, number1, number2;

printf("Select an operation:\n");

printf("1. Addition\n");

printf("2. Subtraction\n");

printf("3. Multiplication\n");

printf("4. Division\n");

printf("Enter your choice: ");

scanf("%d", &choice);

printf("Enter two numbers: ");

scanf("%d %d", &number1, &number2);

switch (choice) {

case 1:

printf("The result is %d\n", number1 + number2);

break;

case 2:

printf("The result is %d\n", number1 - number2);

break;

case 3:

printf("The result is %d\n", number1 \* number2);

break;

case 4:

printf("The result is %d\n", number1 / number2);

break;

default:

printf("Invalid choice.\n");

}

return 0;

}

**Question 3**

#include <stdio.h>

int main() {

int choice, radius;

printf("Select an operation:\n");

printf("1. Calculate circumference of a circle\n");

printf("2. Calculate area of a circle\n");

printf("3. Calculate volume of a sphere\n");

printf("Enter your choice: ");

scanf("%d", &choice);

printf("Enter the radius of the circle: ");

scanf("%d", &radius);

switch (choice) {

case 1:

printf("The circumference of the circle is %.2f\n", 2 \* 3.14159 \* radius);

break;

case 2:

printf("The area of the circle is %.2f\n", 3.14159 \* radius \* radius);

break;

case 3:

printf("The volume of the sphere is %.2f\n", 4 / 3 \* 3.14159 \* radius \* radius \* radius);

break;

default:

printf("Invalid choice.\n");

}

return 0;

}

**Question 4**

#include <stdio.h>

int main() {

char letter;

printf("Enter a letter: ");

scanf("%c", &letter);

switch (letter) {

case 'a':

case 'e':

case 'i':

case 'o':

case 'u':

printf("The letter is a vowel.\n");

break;

default:

printf("The letter is not a vowel.\n");

}

return 0;

}

**Question 5**

#include <stdio.h>

int main() {

int month;

printf("Enter the month number: ");

scanf("%d", &month);

switch (month) {

case 1:

case 3:

case 5:

case 7:

case 8:

case 10:

case 12:

printf("The month has 31 days.\n");

break;

case 4:

case 6:

case 9:

case 11:

printf("The month has 30 days.\n");

break;

case 2:

printf("The month has 28 days.\n");

break;

default:

printf("Invalid month number.\n");

}

return 0;

}