1.

#include <stdio.h>

int main() {

int number;

printf("Enter an integer: ");

scanf("%d", &number);

if (number % 2 == 0) {

printf("The number is even.\n");

} else {

printf("The number is odd.\n");

}

return 0;

}

2.

#include <stdio.h>

int main() {

int number;

printf("Enter an integer: ");

scanf("%d", &number);

switch (number % 2) {

case 0:

printf("The number is even.\n");

break;

case 1:

printf("The number is odd.\n");

break;

default:

printf("Invalid number.\n");

break;

}

return 0;

}

3.

#include <stdio.h>

#define PI 3.14159

int main()

{

int choice;

float radius, result;

printf("Menu:\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 (1-3): ");

scanf("%d", &choice);

printf("Enter the radius: ");

scanf("%f", &radius);

switch (choice)

{

case 1:

result = 2 \* PI \* radius;

printf("Circumference: %.2f\n", result);

break;

case 2:

result = PI \* radius \* radius;

printf("Area: %.2f\n", result);

break;

case 3:

result = (4.0 / 3.0) \* PI \* radius \* radius \* radius;

printf("Volume: %.2f\n", result);

break;

default:

printf("Invalid choice.\n");

}

return 0;

}

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");

break;

}

return 0;

}

5.

#include <stdio.h>

int main()

{

int month;

printf("Enter the month number (1-12): ");

scanf("%d", &month);

switch (month) { case 1:

printf("January has 31 days.\n");break; case 2:

printf("February has 28 days.\n");break; case 3:

printf("March has 31 days.\n");break; case 4:

printf("April has 30 days.\n");break; case 5:

printf("May has 31 days.\n");break; case 6:

printf("June has 30 days.\n");break; case 7:

printf("July has 31 days.\n");break; case 8:

printf("August has 31 days.\n");break; case 9:

printf("September has 30 days.\n");break; case 10:

printf("October has 31 days.\n");break; case 11:

printf("November has 30 days.\n");break; case 12:

printf("December has 31 days.\n");break; default:

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

}

return 0;

}