

main.c



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Run

Output

Clear

```
1 #include <stdio.h>
2
3
4 int calculateFirstDay(int year, int month) {
5     if (month < 3) {
6         month += 12;
7         year--;
8     }
9     int k = year % 100;
10    int j = year / 100;
11    int f = 1 + (13 * (month + 1)) / 5 + k + (k / 4) + (j / 4) - (2
        * j);
12    return f % 7;
13 }
14
15
16 void printCalendar(int year, int month) {
17     int daysInMonth;
18     const char* monthNames[] = {"Invalid", "January", "February",
        "March", "April", "May", "June", "July", "August",
        "September", "October", "November", "December"};
19
20
21     if (month == 2) {
22         if ((year % 4 == 0 && year % 100 != 0) || (year % 400 == 0))
23             daysInMonth = 29;
```

Enter year: 2022  
Enter month (1-12): 10

October 2022

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

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23

daysInMonth = 29;

24

else

25

daysInMonth = 28;

26

} else if (month == 4 || month == 6 || month == 9 || month == 11

) {

27

daysInMonth = 30;

28

} else {

29

daysInMonth = 31;

30

}

31

32

33

printf("\n %s %d\n", monthNames[month], year);

34

printf("Su Mo Tu We Th Fr Sa\n");

35

36

37

int firstDay = calculateFirstDay(year, month);

38

39

40

for (int i = 0; i < firstDay; i++) {

41

printf(" ");

42

}

43

44

45

for (int day = 1; day <= daysInMonth; day++) {

46

printf("%2d ", day);

47

firstDay++;

Output

Clear

Enter year: 2022

Enter month (1-12): 10

October 2022

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

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47 firstDay++;

48 if (firstDay > 6) {

49 firstDay = 0;

50 printf("\n");

51 }

52 }

53 printf("\n");

54 }

55

56 int main() {

57 int year, month;

58

59

60 printf("Enter year: ");

61 scanf("%d", &year);

62 printf("Enter month (1-12): ");

63 scanf("%d", &month);

64

65 if (month < 1 || month > 12) {

66 printf("Invalid month! Please enter a month between 1 and 12\n");

67 return 1;

68 }

69

70

71 printCalendar(year, month);

72 return 0;

Output

Clear

Enter year: 2022

Enter month (1-12): 10

October 2022

Su Mo Tu We Th Fr Sa

1 2 3 4 5 6 7

8 9 10 11 12 13 14

15 16 17 18 19 20 21

22 23 24 25 26 27 28

29 30 31

=== Code Execution Successful ===