A Micro Project Report

on

Problem Solving using C Language

Submitted by
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

NARASARAOPETA ENGINEERING COLLEGE: NARASARAOPET

(AUTONOMOUS)

Accredited by NAAC with A+ Grade and NBA under Tier-1

NIRF rank in the band of 201-300 and is an ISO 9001:2015 certified Approved by
AICTE, New Delhi, Permanently affiliated to JNTU Kakinada, Approved by AICTE,
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Palnadu(Dt.), Andhra Pradesh, India

2024-2025

NARASARAOPETA ENGINEERING COLLEGE: NARASARAOPET

(AUTONOMOUS)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certify that BAYYA RAKESH, Roll No: 23471A0506, a Second Year Student of the Department of Computer Science and Engineering, has completed the Micro Project Satisfactorily in "Problem Solving using C Language" for the Academic Year 2024-2025..

Project Co-Ordinator   HEAD OF THE DEPARTMENT

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Asst. Professor   Professor

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S.No	Description
1.	Display a monthly /annual calendar with current date highlighting

Calendar

AIM: Display a monthly /annual calendar with current date highlighting

```c
#include <stdio.h>
#include <time.h>

int main() {
    int year, month, day, daysInMonth, weekDay, i;


    time_t t = time(NULL);
struct tm *tm = localtime(&t);
year = tm->tm_year + 1900;
month = tm->tm_mon + 1;
day = tm->tm_mday;


    if (month == 2) {        if (year % 4 == 0 && (year %
100 != 0 || year % 400 ==
 0)) {
daysInMonth = 29;
    } else {
        daysInMonth = 28;
    }
```

```
    } else if (month == 4 || month == 6 || month == 9 || month
  == 11) {
      daysInMonth = 30;
    } else {
      daysInMonth = 31;
    }


    weekDay = (year - 1) * 365 + (year - 1) / 4 - (year - 1) /
100
  + (year - 1) / 400;    for (i
= 1; i < month; i++) {
if (i == 2) {
weekDay += 28;            if
(year % 4 == 0 && (year %
100 != 0 || year % 400 ==
  0)) {
weekDay++;
        }
     } else if (i == 4 || i == 6 || i == 9 || i == 11) {
weekDay += 30;
        } else {
          weekDay += 31;
        }
    }
  weekDay = (weekDay + 1) % 7;
```

```c
    printf("      %s %d\n", month == 1 ? "January" : month == 2
   ? "February" : month == 3 ? "March" : month == 4 ?
   "April" : month == 5 ? "May" : month == 6 ? "June" :
   month == 7 ? "July" : month == 8 ? "August" : month == 9
   ? "September" : month == 10 ? "October" : month == 11 ?
   "November" :
   "December", year);
    printf("Su Mo Tu We Th fr
Sa\n");     for (i = 0; i < weekDay;
i++) {         printf("   ");
    }
    for (i = 1; i <= daysInMonth; i++) {
        if (i == day && month == tm->tm_mon + 1 && year ==
   tm->tm_year + 1900) {
            printf("\033[7m%2d\033[0m ", i); // Highlight current
   date
        } else {
            printf("%2d ", i);
        }
        if ((i + weekDay) % 7 == 0) {
printf("\n");
        }
    }
    printf("\n");

    return 0;
}
```

Output:

November 2024
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