BVRITHYDERABAD

College of Engineering for Women

The Temple for Women Empowerment & Human Values

Approved by AICTE & Affiliated to JNTUH, Hyderabad
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PPS Lab Activity	
Department	Basic Science and Humanities
Year/Semester	I B.Tech I Semester
Subject	Programming for Problem Solving Lab
Academic Year(Regulation)	2023-24(BH23)
Subject Code	CS108ES

VISHNU
UNIVERSAL LEARNING

Vision
To emerge as the best among the institutes of technology and research in the country dedicated to the cause of promoting quality technical education.

Mission
At BVRITH , we Strive to ➤ Achieve academic excellence through innovative learning practices. ➤ Enhance intellectual ability and technical competency for a successful career. ➤ Encourage research and innovation. ➤ Nurturestudentstowardsholisticdevelopmentwithemphasisonleadershipskills , Life skills and human values.

23WH1A05G9 - Haripriya
23WH1A05J0   - Akshitha
23WH1A05E5 - Likitha

Project 6: Calendar Application

In this project, you can find out the day corresponding to a given date and view the days and dates corresponding to a particular month and year.

Basically, three operations can be done in this calendar application. To find out the day corresponding to a given date, the date, month and year are asked. You can list the days and dates of any month of any year. For example, entering 04 2014 (April 2014) will give you an output as shown in the screenshot in this post.

You can navigate the months using arrow keys, or press n and p keys to view the next and previous months respectively. The third feature of this project on Calendar application utilizes file handling. With this feature, you can add important notes with corresponding dates.

SOURCE CODE:

```
#include <stdio.h>

// Function to get the day of the week for a given date

int getDayOfWeek(int year, int month, int day) {

    if (month < 3) {

        month += 12;

        year--;

    }

    int h = (day + 2 * month + 3 * (month + 1) / 5 + year + year / 4 - year / 100 + year / 400) % 7;

    return h;

}


// Function to print a monthly calendar

void printCalendar(int year, int month) {

    printf("  Mon  Tue  Wed  Thu  Fri  Sat  Sun\n");


    int dayOfWeek = getDayOfWeek(year, month, 1);

    for (int i = 0; i < dayOfWeek; i++) {
```

```c
        printf("     ");
    }


    int daysInMonth;
    if (month == 4 || month == 6 || month == 9 || month == 11) {
        daysInMonth = 30;
    } else if (month == 2) {
        // Check for leap year
        if ((year % 4 == 0 && year % 100 != 0) || (year % 400 == 0)) {
            daysInMonth = 29;
        } else {
            daysInMonth = 28;
        }
    } else {
        daysInMonth = 31;
    }


    for (int day = 1; day <= daysInMonth; day++) {
        printf("%5d", day);
        if (++dayOfWeek > 6) {
            dayOfWeek = 0;
            printf("\n");
        }
    }
    printf("\n");
}
int main() {
    int year, month;
```

```c
    printf("Enter year: ");
    scanf("%d", &year);

    printf("Enter month (1-12): ");
    scanf("%d", &month);

    if (month < 1 || month > 12) {
        printf("Invalid month.\n");
        return 1;
    }
    printf("\n");
    printCalendar(year, month);

    return 0;
}
```

OUTPUT:

Enter year:2005

Enter month (1-12): 9

```
 Mon  Tue  Wed  Thu  Fri  Sat  Sun
                      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
```