

MINI PROJECT

BY-SIDDHARTHA BANERJEE

RA2111004010132

ECE CORE SECTION-B

PROGRAMMING TOPIC-CALENDAR USING C

CODE

```
#include <stdio.h>

// Function that returns the index of the
// day for date DD/MM/YYYY
int dayNumber(int day, int month, int year)
{

    static int t[] = { 0, 3, 2, 5, 0, 3,
                       5, 1, 4, 6, 2, 4 };

    year -= month < 3;

    return (year + year / 4
            - year / 100
            + year / 400
            + t[month - 1] + day)
           % 7;
}

// Function that returns the name of the
```

```
// month for the given month Number

// January - 0, February - 1 and so on
char* getMonthName(int monthNumber)

{
    char* month;

    switch (monthNumber) {
        case 0:
            month = "January";
            break;
        case 1:
            month = "February";
            break;
        case 2:
            month = "March";
            break;
        case 3:
            month = "April";
            break;
        case 4:
```

month = "May";

break;

case 5:

month = "June";

break;

case 6:

month = "July";

break;

case 7:

month = "August";

break;

case 8:

month = "September";

break;

case 9:

month = "October";

break;

case 10:

month = "November";

break;

```
        case 11:
            month = "December";
            break;
        }
    return month;
}
```

```
// Function to return the number of days
// in a month
int numberOfDays(int monthNumber, int year)
{
    // January
    if (monthNumber == 0)
        return (31);

    // February
    if (monthNumber == 1) {
        // If the year is leap then Feb
        // has 29 days
        if (year % 400 == 0
```

```
    || (year % 4 == 0
    && year % 100 != 0))
        return (29);
    else
        return (28);
}
```

```
// March
```

```
if (monthNumber == 2)
    return (31);
```

```
// April
```

```
if (monthNumber == 3)
    return (30);
```

```
// May
```

```
if (monthNumber == 4)
    return (31);
```

```
// June
```

```
if (monthNumber == 5)
```

```
    return (30);
```

```
    // July
```

```
if (monthNumber == 6)
```

```
    return (31);
```

```
    // August
```

```
if (monthNumber == 7)
```

```
    return (31);
```

```
    // September
```

```
if (monthNumber == 8)
```

```
    return (30);
```

```
    // October
```

```
if (monthNumber == 9)
```

```
    return (31);
```

```
    // November
```



```
if (monthNumber == 10)
```

```
    return (30);
```

```
    // December
```

```
if (monthNumber == 11)
```

```
    return (31);
```

```
}
```

```
// Function to print the calendar of
```

```
    // the given year
```

```
void printCalendar(int year)
```

```
{
```

```
    printf("    Calendar - %d\n\n", year);
```

```
        int days;
```

```
        // Index of the day from 0 to 6
```

```
int current = dayNumber(1, 1, year);
```

```
    // i for Iterate through months
```

```
        // j for Iterate through days
```

```

        // of the month - i
        for (int i = 0; i < 12; i++) {
            days = numberOfDays(i, year);

            // Print the current month name
            printf("\n -----%s-----\n",
                getMonthName(i));

            // Print the columns
            printf(" Sun  Mon  Tue  Wed  Thu  Fri  Sat\n");

            // Print appropriate spaces
            int k;
            for (k = 0; k < current; k++)
                printf("   ");

            for (int j = 1; j <= days; j++) {
                printf("%5d", j);

                if (++k > 6) {

```

```
    k = 0;  
    printf("\n");  
    }  
}
```

```
    if (k)  
        printf("\n");
```

```
current = k;  
}
```

```
return;  
}
```

```
// Driver Code
```

```
int main()  
{  
    int year = 2016;
```

```
// Function Call
```

```

printCalendar(year);

return 0;

}

```

OUTPUT

-----January-----

Sun Mon Tue Wed Thu Fri Sat

					<u>1</u>	<u>2</u>	
	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>	
<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	
<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	
					<u>31</u>		

-----February-----

Sun Mon Tue Wed Thu Fri Sat

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	
	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	
<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	
				<u>28</u>	<u>29</u>		

-----March-----

Sun Mon Tue Wed Thu Fri Sat

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>
	<u>12</u>					
	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>
	<u>19</u>					
	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>
	<u>26</u>					
	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>	

-----April-----

Sun Mon Tue Wed Thu Fri Sat

					<u>1</u>	<u>2</u>
	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
	<u>9</u>					
	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
	<u>16</u>					
	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>
	<u>23</u>					
	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>
	<u>30</u>					

-----May-----

Sun Mon Tue Wed Thu Fri Sat

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>
	<u>7</u>					
	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
	<u>14</u>					
	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>
	<u>21</u>					
	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>
	<u>28</u>					
	<u>29</u>	<u>30</u>	<u>31</u>			

-----June-----

Sun Mon Tue Wed Thu Fri Sat

			<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
--	--	--	----------	----------	----------	----------

<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>
<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>
<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>
<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>		

-----July-----

<u>Sun</u>	<u>Mon</u>	<u>Tue</u>	<u>Wed</u>	<u>Thu</u>	<u>Fri</u>	<u>Sat</u>
				<u>1</u>	<u>2</u>	
	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>
<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>
<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>
				<u>31</u>		

-----August-----

<u>Sun</u>	<u>Mon</u>	<u>Tue</u>	<u>Wed</u>	<u>Thu</u>	<u>Fri</u>	<u>Sat</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>
	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>
<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>
	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>		

-----September-----

<u>Sun</u>	<u>Mon</u>	<u>Tue</u>	<u>Wed</u>	<u>Thu</u>	<u>Fri</u>	<u>Sat</u>
				<u>1</u>	<u>2</u>	<u>3</u>

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

-----October-----

Sun Mon Tue Wed Thu Fri Sat

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

-----November-----

Sun Mon Tue Wed Thu Fri Sat

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

-----December-----

Sun Mon Tue Wed Thu Fri Sat

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

SUBMITTED BY-SIDDHARTHA BANERJEE

ECE SECTION-B

RA2111004010132