

```

//      Course: CS2400-60 Computer Science 2
//      Name: Abdalkarim, Marina
//      Assignment: Programming Assignment P2.1
//      Date assigned: 10/16/18
//      Date due: 10/23/17
//      Date handed in: 10/23/17
//      Remark: The program compares the dates
#include <iostream>
#include <string>
using namespace std;
class date
{
private:
    int month;    // 1 - 12
    int day;      // 1 - 28, 29, 30, 31 depending on month & year
    int year;     // 4-digit, e.g., 2017
public:
    date();
    // Default constructor (investigate; find what it is used for)
    // Postcondition: the newly declared date object is initialized to 01/01/2000
    date(int mm, int dd, int yyyy);
    // Second constructor
    // Postcondition: the newly declared data object is initialized to mm/dd/yyyy
    void setDate(int mm, int dd, int yyyy);
    // Postcondition: set the contents of the calling date object to the values passed to the
    //function
    void displayDateV1();
    // Postcondition: display the calling date object in mm/dd/yyyy format, e.g., 02/22/2017
    void displayDateV2();
    // Postcondition: display the calling date object in the format like: February 22, 2017
    int compareDates(date &dObj);
    // compares the two date objects: the calling one the dObj that is passed to the function
    // Postcondition: returns -1, 0, or 1 if the calling date object if less than, equal to, or
    //greater than dObj, respectively.
};
int main()
{
    date date1, date2;
    int compare;

```

```

        date1.setDate(02, 22, 2017);
        date1.displayDateV1();
        date2.setDate(03, 22, 2017);
        date2.displayDateV2();
        compare = date1.compareDates(date2);
        if (compare == -1)
            cout << "First date is less than second." << endl;
        else if (compare == 0)
            cout << "They're equal" << endl;
        else if (compare = 1)
            cout << "First date is bigger than the second." << endl;
    return 0;
}
date::date()
{
    month = 12;
    day = 0;
    year = 0;
}
date::date(int mm, int dd, int yyyy)
{
    month = mm;
    day = dd;
    year = yyyy;
}
void date::setDate(int mm, int dd, int yyyy)
{
    month = mm;
    day = dd;
    year = yyyy;
}
void date::displayDateV1()
{
    cout << "The first date is " << month << "/" << day << "/" << year << endl;
}
void date::displayDateV2()
{
    string mon;
    if (month == 1)

```

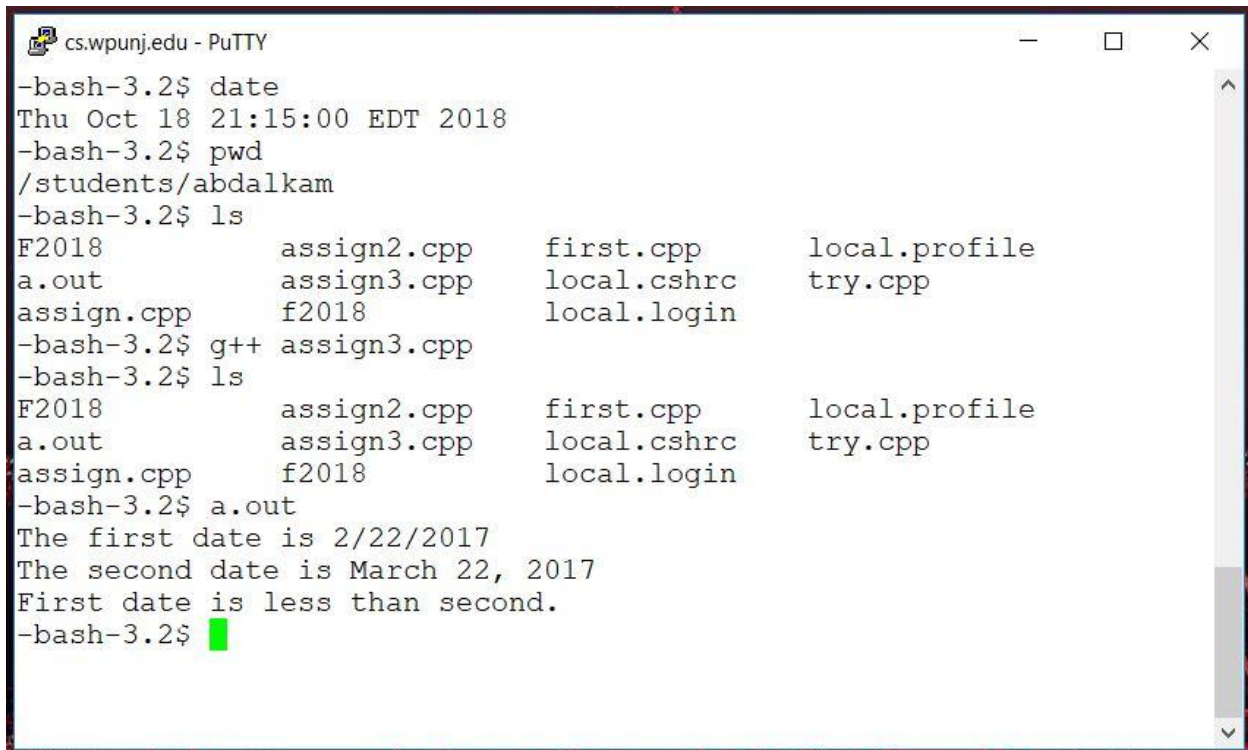
```

        mon = "January";
    else if (month == 2)
        mon = "February";
    else if (month == 3)
        mon = "March";
    else if (month == 4)
        mon = "April";
    else if (month == 5)
        mon = "May";
    else if (month == 6)
        mon = "June";
    else if (month == 7)
        mon = "July";
    else if (month == 8)
        mon = "August";
    else if (month == 9)
        mon = "September";
    else if (month == 10)
        mon = "October";
    else if (month == 11)
        mon = "November";
    else if (month == 12)
        mon = "December";
    cout << "The second date is " << mon << " " << day << ", " << year << endl;
}

int date::compareDates(date &dObj)
{
    if (year < dObj.year)
        return -1;
    else if (year > dObj.year)
        return 1;
    else if (month < dObj.month)
        return -1;
    else if (month > dObj.month)
        return 1;
    else if (day < dObj.day)
        return -1;
    else if (day > dObj.day)
        return 1;
}

```

```
    return 0;
}
```



```
cs.wpunj.edu - PuTTY
-bash-3.2$ date
Thu Oct 18 21:15:00 EDT 2018
-bash-3.2$ pwd
/students/abdalkam
-bash-3.2$ ls
F2018          assign2.cpp    first.cpp      local.profile
a.out          assign3.cpp    local.cshrc    try.cpp
assign.cpp     f2018          local.login
-bash-3.2$ g++ assign3.cpp
-bash-3.2$ ls
F2018          assign2.cpp    first.cpp      local.profile
a.out          assign3.cpp    local.cshrc    try.cpp
assign.cpp     f2018          local.login
-bash-3.2$ a.out
The first date is 2/22/2017
The second date is March 22, 2017
First date is less than second.
-bash-3.2$
```

```
// Course: CS2400-60 Computer Science 2
// Name: Abdalkarim, Marina
// Assignment: Programming Assignment P2.2
// Date assigned: 10/16/18
// Date due: 10/23/17
// Date handed in: 10/23/17
// Remark: The program compares with struct
```

```
#include <iostream>
#include <string>
using namespace std;
struct date
{
private:
    int month;    // 1 - 12
    int day;      // 1 - 28, 29, 30, 31 depending on month & year
    int year;     // 4-digit, e.g., 2017
public:
    date();
    // Default constructor (investigate; find what it is used for)
```

```

// Postcondition: the newly declared date object is initialized to 01/01/2000
date(int mm, int dd, int yyyy);
// Second constructor
// Postcondition: the newly declared data object is initialized to mm/dd/yyyy
void setDate(int mm, int dd, int yyyy);
// Postcondition: set the contents of the calling date object to the values passed to the
// function
void displayDateV1();
// Postcondition: display the calling date object in mm/dd/yyyy format, e.g., 02/22/2017
void displayDateV2();
// Postcondition: display the calling date object in the format like: February 22, 2017
int compareDates(date &dObj);
// compares the two date objects: the calling one the dObj that is passed to the function
// Postcondition: returns -1, 0, or 1 if the calling date object if less than, equal to, or
// greater than dObj, respectively.
};
int main()
{
    date date1, date2;
    int compare;
    date1.setDate(02, 22, 2017);
    date1.displayDateV1();
    date2.setDate(03, 22, 2017);
    date2.displayDateV2();
    compare = date1.compareDates(date2);
    if (compare == -1)
        cout << "First date is less than second." << endl;
    else if (compare == 0)
        cout << "They're equal" << endl;
    else if (compare = 1)
        cout << "First date is bigger than the second." << endl;
    return 0;
}
date::date()
{
    month = 12;
    day = 0;
    year = 0;
}

```

```

date::date(int mm, int dd, int yyyy)
{
    month = mm;
    day = dd;
    year = yyyy;
}
void date::setDate(int mm, int dd, int yyyy)
{
    month = mm;
    day = dd;
    year = yyyy;
}
void date::displayDateV1()
{
    cout << "The first date is " << month << "/" << day << "/" << year << endl;
}
void date::displayDateV2()
{
    string mon;
    if (month == 1)
        mon = "January";
    else if (month == 2)
        mon = "February";
    else if (month == 3)
        mon = "March";
    else if (month == 4)
        mon = "April";
    else if (month == 5)
        mon = "May";
    else if (month == 6)
        mon = "June";
    else if (month == 7)
        mon = "July";
    else if (month == 8)
        mon = "August";
    else if (month == 9)
        mon = "September";
    else if (month == 10)
        mon = "October";
}

```

```

        else if (month == 11)
            mon = "November";
        else if (month == 12)
            mon = "December";
        cout << "The second date is " << mon << " " << day << ", " << year << endl;
    }
int date::compareDates(date &dObj)
{
    if (year < dObj.year)
        return -1;
    else if (year > dObj.year)
        return 1;
    else if (month < dObj.month)
        return -1;
    else if (month > dObj.month)
        return 1;
    else if (day < dObj.day)
        return -1;
    else if (day > dObj.day)
        return 1;
    return 0;
}

```

cs.wpunj.edu - PuTTY

```
-bash-3.2$ date  
Thu Oct 18 21:15:00 EDT 2018
```

```
-bash-3.2$ pwd  
/students/abdalkam
```

```
-bash-3.2$ ls  
F2018          assign2.cpp    first.cpp      local.profile  
a.out          assign3.cpp    local.cshrc    try.cpp  
assign.cpp     f2018          local.login
```

```
-bash-3.2$ g++ assign3.cpp
```

```
-bash-3.2$ ls  
F2018          assign2.cpp    first.cpp      local.profile  
a.out          assign3.cpp    local.cshrc    try.cpp  
assign.cpp     f2018          local.login
```

```
-bash-3.2$ a.out
```

The first date is 2/22/2017

The second date is March 22, 2017

First date is less than second.

```
-bash-3.2$
```