

## Assign 3c

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CISP 360 MW, 1:00 3:50p  
Spring 2015  
Assign 3c

### **Hierarchy Chart**

#### **3.0 Payroll Program**

- 3.1 PrintReportHeadings(inout reportfile as file)
- 3.2 InitializeAccumulators(out numemps as integer, out totreg, totovt, totrate, totgross, totfed, totstate, totSSI, totdefr, totnet as real)
- 3.3 InputEmployeeData( inout i as integer, record as array[1..MAXEMPS] of EmployeeRecord)
- 3.4 join\_lastfirst(in lastname, firstname as string)
- 3.5 CalculateGross(in hours, payrate as real, out gross as real)
- 3.6 split\_hours(in hours, out regularHours, ovtHours as real)
- 3.7 CalculateTaxes(in gross, defr as real, out ft, st, ssit as real)
  - 3.7.1 CalcFedTax(in gross, defr as real, out ft as real)
  - 3.7.2 CalcStatetax(in ft as real, out st as real)
  - 3.7.3 CalcSSItax(in gross, defr as real, out ssit as real)
- 3.8 AddDetailToAccumulators(inout record as array of EmployeeRecord[1..MAXEMPS], in i as integer, inout numemps as integer, totrate, totreg, totovt, totgross, totfed, totstate, totSSI, totdefr, totnet as real)
- 3.9 SortbyLastName(inout record as array[1..MAXEMPS] of EmployeeRecord, in start, finish, as integer)
- 3.10 PrintSummaryReport(in totreg, totovt, totrate, totgross, totfed, totstate, totSSI, totdefr, totnet as real, numemps as integer, reportfile as file)
- 3.11 PrintDetailReport(inout reportfile as file, record as array[1..MAXEMPS] of EmployeeRecord, i as integer)
- 3.12 PrintCheck(in CheckFile as FILE, record as array[1..MAXEMPS] of EmployeeRecord, i CheckNo as integer, CompanyName, CompanyAddress, CompanyCityStateZip, EmpAddress, EmpCityState, EmpZip as string)
  - 3.12.1 PrintCheckHeadings(Inout CheckFile as file, CompanyName, CompanyAddress, CompanyCityStateZip as string, CheckNo as integer)
  - 3.12.2 PrintCheckBody(inout CheckFile as file, record as EmployeeRecord[1..MAXEMPS], CheckNo, I as integer)
    - 3.12.2.1 convertNetPay(in netpay as real, out netPayString as string)

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        3.12.2.1.1 isVowel(in aChar as character,
                           out boolean)
        3.12.2.2 generateRefCode(in lastname as string,
                                  Inout chkno as integer, out tempStr as string)
        3.12.3 PrintCheckStub(In EmpAddress, EmpCityState,
                               EmpZip,Inout CheckFile as file, record as array of
                               EmployeeRecord[1..MAXEMPS], CheckNo, i as integer)
            3.12.3.1 calcRegPay(in payrate, regularHours
                                as real, out regpay as real)
            3.12.3.2 calcOvtPay(in payrate, ovtHours as
                                real, out ovtpay as real)
            3.12.3.3 calcTaxTotal(in fedtax, statetax,
                                   ssitax as real, out TaxTotal as real)
            3.12.3.4 calcNetPay(in record[1..MAXEMPS] of
                                EmployeeRecord, in i as integer, out netpay as
                                                                real)
3.13 getEmpResidence(out EmpAddress, EmpCityState,EmpZip as string)
3.14 getCompanyLocation(Out CompanyName, CompanyAddress,
                        CompanyCityStateZip as string)

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Declare reportfile, CompanyDataFile, EmpDataFile, CheckFile as file.
Declare totreg, totovt, totrate, totgross, totfed, totstate, totSSI,
totdefr, totnet, REG_HOURS, OVTRATE as real.
Delcare numemps, i, CheckNo, MAXEMPS, SIZE, MAXDESCS as integer.
Declare CompanyName, CompanyAddress, CompanyCityStateZip, EmpAddress,
EmpCityState, EmpZip as string.
Define EmployeeRecord as record
    Declare lastname, firstname as string
    Declare hours,reghrs,ovthrs, payrate, defr, gross, fedtax,
    statetax, ssitax as real
End record
Declare record as array[1..SIZE] of EmployeeRecord
Declare temprecord as array[1..MAXEMPS] of EmployeeRecord

```

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scc-bdiv-cis.scc.losrios.edu - PuTTY
cisp360q_stu018@scc-bdiv-cis:~/Assign-3/3c$ ls -l
total 116
-rw-r--r-- 1 cisp360q_stu018 cisp360q 881 May 6 17:05 calcTaxes.cpp
-rw-r--r-- 1 cisp360q_stu018 cisp360q 2208 May 8 12:35 calcTax.o
-rw-r--r-- 1 cisp360q_stu018 cisp360q 70 May 8 12:55 CompanyInfo.dat
-rw-r--r-- 1 cisp360q_stu018 cisp360q 34 May 10 19:47 EmpData.txt
-rw-r--r-- 1 cisp360q_stu018 cisp360q 9800 May 12 15:41 EmployeeChecks.txt
-rw-r--r-- 1 cisp360q_stu018 cisp360q 291 May 11 18:39 EMPLOYEES.h
-rw-r--r-- 1 cisp360q_stu018 cisp360q 1062 May 9 23:37 GenRef.cpp
-rw-r--r-- 1 cisp360q_stu018 cisp360q 17247 May 12 15:36 main.cpp
-rwxr-xr-x 1 cisp360q_stu018 cisp360q 27553 May 12 15:39 main.exe
-rw-r--r-- 1 cisp360q_stu018 cisp360q 264 May 6 17:06 makefile
-rw-r--r-- 1 cisp360q_stu018 cisp360q 179 May 9 19:43 numStrings.dat
-rw-r--r-- 1 cisp360q_stu018 cisp360q 1941 May 12 15:35 readDescs.cpp
-rw-r--r-- 1 cisp360q_stu018 cisp360q 1427 May 12 15:41 report.txt
-rw-r--r-- 1 cisp360q_stu018 cisp360q 992 May 6 17:05 SortbyLastName.cpp
-rw-r--r-- 1 cisp360q_stu018 cisp360q 2632 May 11 18:45 SortbyLastName.o
-rw-r--r-- 1 cisp360q_stu018 cisp360q 78 May 6 17:06 TAXES.h
-rw-r--r-- 1 cisp360q_stu018 cisp360q 73 May 9 21:34 TempEmp.dat
cisp360q_stu018@scc-bdiv-cis:~/Assign-3/3c$ cat makefile
calcTax.o:      calcTaxes.cpp TAXES.h
                g++ -c calcTaxes.cpp -o calcTax.o
SortbyLastName.o:  SortbyLastName.cpp EMPLOYEES.h
                g++ -c SortbyLastName.cpp -o SortbyLastName.o
main.exe:         main.cpp calcTax.o SortbyLastName.o
                g++ main.cpp calcTax.o SortbyLastName.o -o main.exe
cisp360q_stu018@scc-bdiv-cis:~/Assign-3/3c$ make main.exe
make: `main.exe' is up to date.
cisp360q_stu018@scc-bdiv-cis:~/Assign-3/3c$ ./main.exe
```

```
scc-bdiv-cis.scc.losrios.edu - PuTTY
Please enter employee's last name: Doe
Please enter employee's first name: John
Please enter the employee's total hours worked for this pay period: 46.50
Please enter employee's hourly rate of pay: 17
Please enter employee's amount of deferred earnings: 50
Please enter employee's last name: Whittle
Please enter employee's first name: Ed
Please enter the employee's total hours worked for this pay period: 25.50
Please enter employee's hourly rate of pay: 11.50
Please enter employee's amount of deferred earnings: 0
Please enter employee's last name: Marion
Please enter employee's first name: Louise
Please enter the employee's total hours worked for this pay period: 40
Please enter employee's hourly rate of pay: 13
Please enter employee's amount of deferred earnings: 100
Please enter employee's last name: Prentiss
Please enter employee's first name: Paula
Please enter the employee's total hours worked for this pay period: 50.50
Please enter employee's hourly rate of pay: 15.75
Please enter employee's amount of deferred earnings: 125
Please enter employee's last name: Davidson
Please enter employee's first name: Carl
Please enter the employee's total hours worked for this pay period: 38
Please enter employee's hourly rate of pay: 8.75
Please enter employee's amount of deferred earnings: 15
cisp360q_stu018@scc-bdiv-cis:~/Assign-3/3c$ cat report.txt
Employee      Pay      Reg Hrs      Gross      Fed      SSI      Net
Name          Rate      Ovt Hrs      Pay        State    Defr     Pay
=====

```



```
scc-bdiv-cis.scc.losrios.edu - PuTTY
*****
*****
*                                     *
*                               Check No 101                               *
*                                     *
* Sabre Corporation                                                         *
* 15790 West Henness Lane                                                  *
* New Corio, New Mexico 65790                                             *
*                                     *
* Pay to the Order of                                                       *
*                                     *
* John Doe                                                                  *
*                                     *
* The sum Six Hundred and 36/100 Dollars                                  *
*                                     *
* Reference: D101                                                           *
*                                     *
*****
*                               Check No 101                               *
*                                     *
* John Doe      Reg Pay: 680.00 Fed Tax: 119.36                            *
* 1345 14th St  Ovt Pay: 165.75 State Tax: 8.36                           *
* Sacramento, Ca Gross Pay: 845.75 SSI Tax: 61.67                         *
* 95811         Net Pay: 606.36 Tax Total: 189.39                        *
*                                     *
*****
```

```
scc-bdiv-cis.scc.losrios.edu - PuTTY
*****
*****
*                                     *
*                               Check No 102                               *
*                                     *
* Sabre Corporation                                                         *
* 15790 West Henness Lane                                                  *
* New Corio, New Mexico 65790                                             *
*                                     *
* Pay to the Order of                                                       *
*                                     *
* Louise Marion                                                            *
*                                     *
* The sum Three Hundred Twenty- and 4/100 Dollars                        *
*                                     *
* Reference: MRN102                                                         *
*                                     *
*****
*                               Check No 102                               *
*                                     *
* Louise Marion      Reg Pay: 520.00 Fed Tax: 63.00                       *
* 1345 14th St       Ovt Pay: 0.00 State Tax: 4.41                       *
* Sacramento, Ca     Gross Pay: 520.00 SSI Tax: 32.55                     *
* 95811              Net Pay: 320.04 Tax Total: 99.96                     *
*                                     *
*****
*****
```

```
scc-bdiv-cis.scc.losrios.edu - PuTTY
*****
*                                     *
*                               Check No 103                               *
*                                     *
*   Sabre Corporation                                                     *
*   15790 West Henness Lane                                              *
*   New Corio, New Mexico 65790                                         *
*                                     *
*   Pay to the Order of                                                 *
*                                     *
*   Paula Prentiss                                                       *
*                                     *
*   The sum Five Hundred Seventy-Three and 83/100 Dollars               *
*                                     *
*   Reference: PRNTSS103                                                 *
*                                     *
*   *****                                                              *
*   Check No 103                                                         *
*                                     *
*   Paula Prentiss   Reg Pay:  630.00   Fed Tax:  112.96               *
*   1345 14th St     Ovt Pay:  248.06   State Tax:   7.91             *
*   Sacramento, Ca   Gross Pay: 878.06   SSI Tax:   58.36             *
*   95811            Net Pay:  573.83   Tax Total: 179.23             *
*                                     *
*   *****                                                              *
*****
```

```
scc-bdiv-cis.scc.losrios.edu - PuTTY
*****
*                                     *
*                               Check No 104                               *
*                                     *
*   Sabre Corporation                                                     *
*   15790 West Henness Lane                                              *
*   New Corio, New Mexico 65790                                         *
*                                     *
*   Pay to the Order of                                                 *
*                                     *
*   Ed Whittle                                                           *
*                                     *
*   The sum Two Hundred Twenty-Three and 46/100 Dollars                 *
*                                     *
*   Reference: WH TTL104                                                 *
*                                     *
*   *****                                                              *
*   Check No 104                                                         *
*                                     *
*   Ed Whittle   Reg Pay:  293.25   Fed Tax:   43.99               *
*   1345 14th St  Ovt Pay:    0.00   State Tax:   3.08             *
*   Sacramento, Ca Gross Pay: 293.25   SSI Tax:   22.73             *
*   95811        Net Pay:  223.46   Tax Total:  69.79             *
*                                     *
*   *****                                                              *
cisp360q_stu018@scc-bdiv-cis:~/Assign-3/3c$
```