Student Summer Internship (Training) Management System

In this homework, implement a **Student Internship Management** program that will be used by Engineering Faculty of Dokuz Eylul University.

The software has to include some entities to handle the records of departments, students, instructors, companies, internships, etc.

Engineering Faculty has 11 departments and approximately 6000 students. Example departments are as follows:

DeptID	DeptName	DeptID	DeptName
CME	Computer Engineering	JEO	Geology Engineering
CEV	Environmental Engineering	MDN	Mining Engineering
EEE	Electrical-Electronic Engineering	MAK	Mechanical Engineering
END	Industrial Engineering	MMM	Metallurgy and Material Engineering
INS	Civil Engineering	TKS	Textile Engineering
JEF	Geophysics Engineering		

Compulsory internship period is different in the departments. For example:
- 12 weeks for Computer Engineering
- 16 weeks in Textile Engineering
- ... etc.

There are different types of summer training for each department. For example:
- Hardware Training (2 weeks), Software Training (4 weeks), Free (6 weeks) in computer engineering
- Workshop Training (4 weeks), Integrated Textile Training (6 weeks), Free (6 weeks) in textile engineering
- ... etc.

Internship Committee in each department consists of three instructors. For example:
- Assoc.Prof.Dr. Mehmet Hilal OZCANHAN, Res.Asst. Elife KIYAK, and Res.Asst. Goksu TUYSUZOGLU in computer engineering
- Asst.Prof.Dr. Ozlem KAYACAN, Res.Asst. Ali TAS and Res.Asst. Yasemin BULUT in textile engineering
- ... etc.

After completing internship, each student reports the details about his/her internship such as company name, start and end dates. Then the instructors of the department examine the report and add information into "Student Summer Internship Management" software.

If a student has done internship in a company where nobody has done before; then, at first company information (name, address (formatted as street, no, town, city, country), phone number (formatted as country code + area code + number), facility area, contact person) should be entered into the database of the system. Only after that, the internship information can be added to the system.

Company, Instructor, and Internship entities have ID properties to identify each record. All IDs must be incremented automatically.

If the number of weeks between start and finish dates is a fractional number, it should be rounded down. For instance, if a student completes internship from 15.07.2019 to 31.07.2019, it is considered as 2 weeks of internship.

At the beginning of the program, an input file (*input.txt*) must be read and processed line by line.
Each line corresponds to an individual command. Each command must be parsed and executed in order.

Don't take any input from the user !!!

After reading the file, the following 6 reports should be written on the screen.

List all data:
1- List all departments	(with their internship types)	
2- List all instructors	(with their titles and departments)	
3- List all students	(with their all information such as genders, phone numbers, etc.)	
4- List all companies	(with their all information)	
5- List all internships	(student no, company name, internship type, the number of weeks)	

Statistic

6- Print top company   (print the name of the company that have the most internship) (if more than one, list all of them)

Error Checking

The program should control all possible errors such as:
- Invalid date such as 29.02.2017
- Adding an internship for a non-existing department code
- ... etc.

Don't forget to create Date, Address and Phone classes.

Your program should include at least one inner class.

In one class, there must be more than one constructor.

Input file format:

Department,department_code,department_name,title,instructor1,title,instructor2,title,instructor3,Training_type1,week,Training_type2,week,Training_type3,week

Internship,department_code,student_number,student_name,birthdate,gender,class,student_phone,Training_type,start_date,end_date,company_name,street,no,town,city,country,phone_country_code,phone_area_code,phone_number,facility_area,contact_person

The program should correctly work with any input file. The program should be dynamic. The following input file is only an example. It will be changed during the code control task.

A sample input.txt

Department,CME,Computer Engineering,Assoc.Prof.Dr.,Mehmet Hilal OZCANHAN,Res.Asst.,Elife KIYAK,Res.Asst.,Goksu

TUYSUZOGLU,Hardware Training,2,Software Training,4,Free,6

Department,CEV,Environmental Engineering,Prof.Dr.,Ayse GUR,Res.Asst.,Sibel TOSUN,Res.Asst.,Ahmet TARAK,Practical

Training,3,Theoretical Training,2,Free,5

Department,EEE,Electrical and Electronic Engineering,Asst.Prof.Dr.,Taner YAR,Res.Asst.,Remzi AK,Res.Asst.,Faruk

YILMAZ,Electrical Training,4,Electronic Traning,3,Free,2

Department,END,Industrial Engineering,Prof.Dr.,Emre TEMIZ,Res.Asst.,Yeliz TUT,Res.Asst.,Zeynep YAR,Workshop

Training,4,Production Training,4,Free,4

Department,INS,Civil Engineering,Asst.Prof.Dr.,Pelin VARAN,Res.Asst.,Mehmet SARI,Res.Asst.,Melisa TAK,Summer

Training I,2,Summer Training II,4,Free,2

Department,JEF,Geophysics Engineering,Asst.Prof.Dr.,Levent SERIN,Res.Asst.,Mehmet AK,Res.Asst.,Meltem

KALIN,Summer Training I,2,Summer Training II,4,Free,2

Department,JEO,Geology Engineering,Asst.Prof.Dr.,Nazan SERT,Res.Asst.,Deniz SARI,Res.Asst.,Melisa TAK,Summer

Training I,2,Summer Training II,4,Free,2

Department,MDN,Mining Engineering,Asst.Prof.Dr.,Pelin VARAN,Res.Asst.,Mehmet SARI,Res.Asst.,Emine YEMEK,Business

Training I,2,Management Training II,4,Free,2

Department,MAK,Mechanical Engineering,Asst.Prof.Dr.,Fatma NAZ,Res.Asst.,Sadet SARI,Res.Asst.,Nil BEN,Basic

Training,6,Advanced Training,2,Free,2

Department,MMM,Metallurgy and Material Engineering,Asst.Prof.Dr.,Ayse UT,Res.Asst.,Mehmet PAN,Res.Asst.,Cenk

PERDE,Summer Training I,2,Summer Training II,6,Free,2

Department,TKS,Textile Engineering,Asst.Prof.Dr.,Can MANA,Res.Asst.,Beril LEYLEK,Res.Asst.,Elif SIMSEK,Workshop

Training,4,Integrated Textile Training,6,Free,6

Internship,CME,2018510012,Sabri ERDEK,12.12.1990,man,3,+90,532,1112233,Software Training,15.07.2019,31.07.2019,

VESTEL,Sanayi cad.,12,Yunusemre,Manisa,Turkey,+90,236,2374066,Electronic,Turan ESEN

Internship,CME,2018510012,Emel SEVIMLI,20.01.1991,woman,2,+90,532,6765432,Hardware Training,10.07.2019,

16.08.2019,Ericsson,Dumlupinar cad.,10,Tinaztepe,Izmir,Turkey,+90,232,2384600,Telecommunication,Kemal DERT