The Central Statistics Office (CSO) was established in 1949 as Ireland's national statistical office and continually produce statistics on a broad range of topics. As part of their work, the CSO monitor the number of births over the course of a year (and indeed over a longer period). The organisation has ranked the popularity of each day of the year based on the average number of daily births. Number 1 rank is the most popular day of the year to be born and rank 366 is the least popular day of the year to be born.

The data they have produced is based on average data over the period 1980 – 2014

I have stored the data in a file (which is available from Moodle) called "days.txt". The content of this file is as follows:

	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
Jan	361	343	193	175	196	205	201	218	235	297	322	303	352	231	276	256	283	282	296	255	260	278	337	281	301	280	292	293	257	283	299
Feb	216	266	249	269	278	298	246	307	320	290	247	252	328	252	191	305	237	186	273	172	194	192	233	159	82	165	124	173	366		
Mar	60	221	140	184	61	128	69	104	134	101	111	32	113	70	132	50	362	316	106	81	47	107	155	277	174	77	128	195	196	199	179
Apr	306	53	185	259	240	198	220	100	227	214	148	274	268	103	65	162	203	97	144	186	224	29	43	158	127	147	96	35	25	22	
May	34	52	168	180	93	120	37	18	48	27	87	112	63	62	168	91	134	134	168	98	26	181	244	178	163	211	80	88	207	200	206
Jun	314	340	153	212	308	231	234	89	140	19	39	151	190	186	109	92	85	70	134	30	243	134	121	83	113	133	36	116	58	122	
Jul	65	54	93	28	57	204	122	48	63	186	46	68	108	86	83	67	79	59	95	76	55	75	40	41	98	51	89	74	104	73	152
Aug	131	228	221	319	154	175	168	44	77	210	207	109	157	113	56	160	295	286	215	236	182	223	317	325	145	150	134	327	216	326	329
Sep	262	252	202	244	249	226	213	207	124	163	126	143	238	117	146	38	13	14	17	9	12	5	2	7	10	6	4	15	3	8	
Oct	1	11	20	42	45	101	23	142	117	130	165	304	310	249	321	311	290	309	289	322	335	167	258	312	349	358	356	347	342	357	355
Nov	345	331	336	264	287	238	302	242	313	240	175	230	262	269	324	341	272	247	266	265	329	350	346	318	300	294	348	351	353	354	
Dec	338	288	224	332	315	332	344	271	229	261	274	156	285	148	117	33	31	21	16	25	161	334	360	363	364	365	359	339	206	70	218

As can be seen from the file, October 1st is the most popular/common day of the year to be born on. December 25 is the 364th most common day to be born on. Unsurprisingly, February 29th is the least common day to be born on.

As the file is based on average figures, two or more days may have the same ranking.

To Do:

Write an application which will initially parse the file and store the relevant information within it in an appropriate data structure. Once parsed, the user should be continually prompted to enter a date in the form dd/mm. If the user enters a valid date, the application will respond by displaying its popularity ranking. If the user enters an invalid date the application should inform them of this and prompt them again for a new date. The user should be continually prompted for dates until such time as they enter the word "quit"

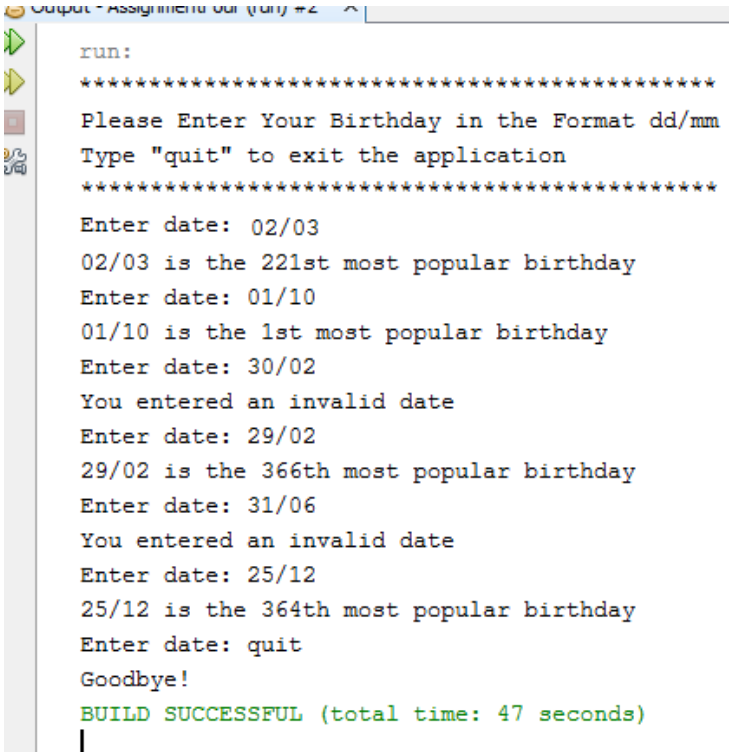
Notes:

- The application should parse the file **once** – at start up. In other words, it should not read from the file every time the user enters a date.
- Examples of invalid dates include 30/02, 31/06 and 0/12. I have provided code to validate dates for you.
- As previously mentioned the end-user will signify their intention to terminate the application by entering the word desire to quit the application – use a sentinel controlled loop for this.
- You will find some sample code here to help you with this assignment - https://repl.it/EqCq/10

- The following table lists the maximum number of days in each of the 12 months of the year.

(max) days in each month	
January = 31	July = 31
February = 29	August = 31
March = 31	September = 30
April = 30	October = 31
May = 31	November = 30
June = 30	December = 31

A Sample Run is as follows:



My application runs as a console application (with all input/output using System.in/System.out). If you wish, your application can use JOptionPane *for both input and output.*