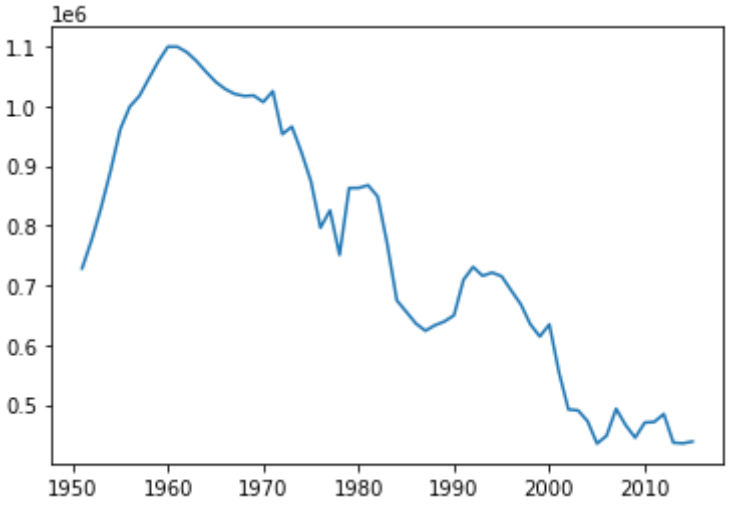
In [13]:
```
import matplotlib.pyplot as plt
import pandas as pd

data = pd.read_excel('3주_data_연도별출생인구.xlsx')#Pandas 엑셀 파일 불러오기
plt.plot(data['연도'], data['출생아수'])
plt.show()
```



In [5]:
```
data[0:3]
```

Out[5]:

	연도	출생아수	천명당 출생률
0	1951	728175	37.7
1	1952	775630	39.6
2	1953	830330	41.6

In [7]:
```
data['연도'][0:10]
```

Out[7]:
```
0    1951
1    1952
2    1953
3    1954
4    1955
5    1956
6    1957
7    1958
8    1959
9    1960
Name: 연도, dtype: int64
```

In [9]:
```
data.tail(4)
```

Out[9]:

	연도	출생아수	천명당 출생률
60	2011	471265	9.4
61	2012	484550	9.6
62	2013	436455	8.6
63	2014	435435	8.6
64	2015	438420	8.6

In [14]:
```
data.head(7)
```

Out[14]:

	연도	출생아수	천명당 출생률
0	1951	728175	37.7
1	1952	775630	39.6
2	1953	830330	41.6
3	1954	892236	43.4
4	1955	961055	45.4
5	1956	999005	45.2
6	1957	1016573	44.8

In [15]:
```
data
```

Out[15]:

	연도	출생아수	천명당 출생률
0	1951	728175	37.7
1	1952	775630	39.6
2	1953	830330	41.6
3	1954	892236	43.4
4	1955	961055	45.4
...	...	...	...
60	2011	471265	9.4
61	2012	484550	9.6
62	2013	436455	8.6
63	2014	435435	8.6
64	2015	438420	8.6

65 rows × 3 columns

In [18]:
```
data.query('1980<=연도<2000')
```

Out[18]:

	연도	출생아수	천명당 출생률
29	1980	862835	22.6
30	1981	867409	22.4
31	1982	848312	21.6
32	1983	769155	19.3
33	1984	674793	16.7
34	1985	655489	16.1
35	1986	636019	15.4
36	1987	623831	15.0
37	1988	633092	15.1
38	1989	639431	15.1
39	1990	649738	15.2
40	1991	709275	16.4
41	1992	730678	16.7
42	1993	715826	16.0
43	1994	721185	16.0
44	1995	715020	15.7
45	1996	691226	15.0
46	1997	668344	14.4
47	1998	634790	13.6
48	1999	614233	13.0

In [20]:
```
data.query('출생아수>=1000000')
```

Out[20]:

	연도	출생아수	천명당 출생률
6	1957	1016573	44.8
7	1958	1046011	44.5
8	1959	1074876	44.2
9	1960	1099294	44.0
10	1961	1099164	42.7
11	1962	1089951	41.1
12	1963	1075203	39.4
13	1964	1057241	37.8
14	1965	1040544	36.3
15	1966	1028479	34.9
16	1967	1020235	33.9
17	1968	1016739	33.0
18	1969	1017618	32.3
19	1970	1006645	31.2
20	1971	1024773	31.2

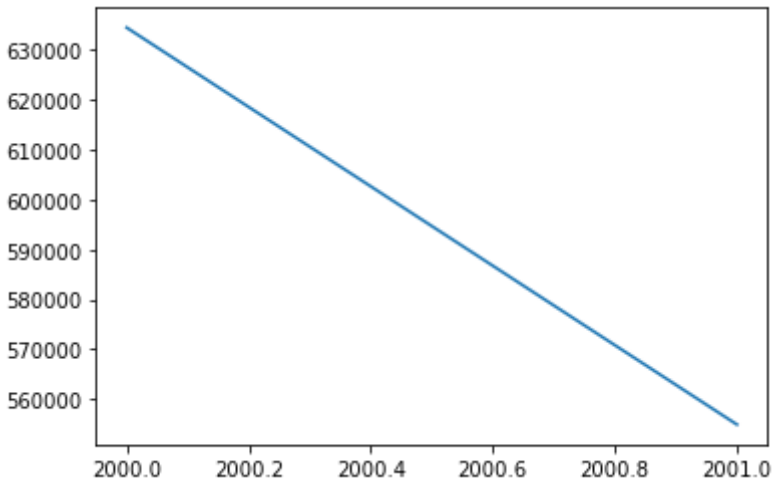
In [21]:
```
data.query('연도>=2000 & 출생아수 >=500000')
```

Out[21]:

	연도	출생아수	천명당 출생률
49	2000	634501	13.3
50	2001	554895	11.6

In [22]:
```
import matplotlib.pyplot as plt #시험 x 조회 후 데이터 다시 입력 그래프 그리기
import pandas as pd

data = pd.read_excel('3주_data_연도별출생인구.xlsx')#Pandas 엑셀 파일 불러오기
data = data.query('연도>=2000 & 출생아수 >=500000')
plt.plot(data['연도'], data['출생아수'])
plt.show()
```



In [24]:
```
import pandas as pd
```

```
a = pd.read_csv('샘플.csv')#comma seperated value(,로 구분되 파일), pd.read_확장자('
a
```

Out[24]:

	10	20	30
0	20	50	60

In [30]:
```
pip install folium
```

```
Defaulting to user installation because normal site-packages is not writeable
Requirement already satisfied: folium in c:₩users₩ssu₩appdata₩roaming₩python₩python3
9₩site-packages (0.12.1.post1)
Requirement already satisfied: numpy in c:₩anaconda3₩lib₩site-packages (from folium)
(1.21.5)
Requirement already satisfied: branca>=0.3.0 in c:₩users₩ssu₩appdata₩roaming₩python
₩python39₩site-packages (from folium) (0.5.0)
Requirement already satisfied: jinja2>=2.9 in c:₩anaconda3₩lib₩site-packages (from f
olium) (2.11.3)
Requirement already satisfied: requests in c:₩anaconda3₩lib₩site-packages (from foli
um) (2.27.1)
Requirement already satisfied: MarkupSafe>=0.23 in c:₩anaconda3₩lib₩site-packages (f
rom jinja2>=2.9->folium) (2.0.1)
Requirement already satisfied: idna<4,>=2.5 in c:₩anaconda3₩lib₩site-packages (from
requests->folium) (3.3)
Requirement already satisfied: charset-normalizer~=2.0.0 in c:₩anaconda3₩lib₩site-pa
ckages (from requests->folium) (2.0.4)
Requirement already satisfied: urllib3<1.27,>=1.21.1 in c:₩anaconda3₩lib₩site-packag
es (from requests->folium) (1.26.9)
Requirement already satisfied: certifi>=2017.4.17 in c:₩anaconda3₩lib₩site-packages
(from requests->folium) (2021.10.8)
Note: you may need to restart the kernel to use updated packages.
```

In [31]:
```
import folium
```

```
---------------------------------------------------------------------------
--
ModuleNotFoundError                       Traceback (most recent call last)
Input In [31], in <cell line: 1>()
----> 1 import folium

ModuleNotFoundError: No module named 'folium'
```

In [ ]:
```
```