

void create();

```
Enter command or "command" for list of commands: create  
array creation complete!
```

int size();

```
Enter command or "command" for list of commands: size  
Array size is: 1000  
Enter command or "command" for list of commands:
```

void display();

Enter command or "command" for list of commands: display

Your array in a table:

340	362	63	858	386	462	369	754	376	528
138	204	96	888	601	552	272	949	722	593
133	744	325	395	176	574	349	531	512	922
286	476	464	522	595	407	475	112	703	346
861	508	650	108	540	815	614	504	415	987
347	752	101	298	79	13	882	469	386	348
133	191	410	138	661	384	794	859	909	861
864	231	533	128	871	759	508	356	842	326
787	589	2	515	723	357	930	679	218	305
944	34	386	238	127	554	378	262	915	407
537	823	245	656	72	774	608	850	943	871
91	715	491	865	80	970	695	488	363	497
868	882	351	493	213	799	726	126	375	66
184	266	902	789	126	46	236	892	711	32
950	937	826	239	943	760	941	228	175	243
917	677	133	297	439	958	184	826	311	891
493	774	95	909	244	535	371	929	563	996
762	47	327	344	95	176	872	50	912	425
181	622	319	832	320	780	776	149	563	183
410	531	579	193	113	367	195	53	731	8
436	501	314	359	572	333	369	377	549	112
863	418	496	841	576	989	585	860	433	809
773	255	366	134	329	499	974	929	852	15
79	628	712	583	423	993	573	896	402	400
559	616	396	927	529	796	657	578	593	898
219	939	238	104	181	195	447	932	614	138
238	77	407	772	166	554	648	461	448	170
904	910	28	371	548	623	614	135	578	135
855	388	678	99	702	243	437	83	254	796
8	331	2	343	291	65	510	22	287	602
175	809	868	514	630	482	931	971	553	187
243	141	659	124	90	872	446	937	375	342
809	299	334	100	558	670	963	74	608	731
870	977	730	919	478	692	885	188	89	227
806	798	444	948	606	728	239	330	605	360
51	155	789	409	38	364	181	56	239	472

void app_begin(int in);

```
Enter command or "command" for list of commands: app_begin

Input integer: 69
Appbegan!

Enter command or "command" for list of commands: display

Your array in a table:
```

69	340	362	63	858	386	462	369	754	376
528	138	204	96	888	601	552	272	949	722
593	133	744	325	395	176	574	349	531	512

void app_end(int end);

```
Enter command or "command" for list of commands: app_end

Input integer: 420
Appended!

Enter command or "command" for list of commands: display

Your array in a table:
```

945	491	104	419	527	904	72	788	491	731
328	724	253	599	458	482	483	639	704	660
321	342	339	422	636	929	48	214	523	55
752	686	703	840	694	153	397	588	135	466
962	741	989	233	158	248	260	895	884	296
417	420	97	820	183	671	891	257	524	366
468	420								

void del_begin();

```
Enter command or "command" for list of commands: del_begin

Beginning deleted!

Enter command or "command" for list of commands: display

Your array in a table:
```

340	362	63	858	386	462	369	754	376	528
528	138	204	96	888	601	552	272	949	722
593	133	744	325	395	176	574	349	531	512

void del_end();

```
Enter command or "command" for list of commands: del_end

End deleted!

Enter command or "command" for list of commands: display

Your array in a table:
```

340	362	63	858	386	462	369	754	376	528
-----	-----	----	-----	-----	-----	-----	-----	-----	-----

686	703	840	694	153	397	588	135	466	962
741	989	233	158	248	260	895	884	296	417
420	97	820	183	671	891	257	524	366	468

void inv();

```
Enter command or "command" for list of commands: inv
Array reversed!
Enter command or "command" for list of commands: display
Your array in a table:
```

997	996	995	993	991	990	989	989	989	988
988	987	987	987	986	985	983	981	977	976
974	971	971	970	970	965	963	962	961	958

int sum();

```
Enter command or "command" for list of commands: sum
Sum of elements in the array: 482172
Enter command or "command" for list of commands:
```

void sort();

```
Enter command or "command" for list of commands:
sort
```

1	1	2	2	3	8	8	9	9	10
10	13	13	14	15	17	20	22	22	22
24	24	26	27	28	28	29	29	32	32
34	34	35	36	37	38	38	39	42	43
46	47	47	48	50	51	51	52	53	53
55	55	56	56	58	59	59	60	63	65
65	66	67	68	68	69	69	69	69	70
70	72	72	73	73	74	74	75	76	77
77	78	79	79	80	80	83	83	84	86
87	87	89	89	89	90	90	91	92	95
95	96	96	97	97	99	99	99	100	100

void odd_array();

Enter command or "command" for list of commands: odd_array

Odd Numbers:

1	1	3	9	9	13	13	15	17	27
29	29	35	37	39	43	47	47	51	51
53	53	55	55	59	59	63	65	65	67
69	69	69	69	73	73	75	77	77	79
79	83	83	87	87	89	89	89	91	95
95	97	97	99	99	99	101	101	113	113
123	125	127	133	133	133	135	135	135	141
145	147	149	149	149	151	153	153	155	157
159	159	159	161	163	167	171	173	173	175
175	177	181	181	181	181	181	183	183	187
191	191	193	195	195	197	207	207	211	213
213	213	215	219	219	225	227	229	231	233
233	239	239	239	239	239	241	243	243	243
243	245	247	247	251	253	255	255	257	261
267	271	273	281	283	283	285	287	289	291
293	295	295	297	299	305	305	307	307	307
309	309	311	317	319	319	321	325	325	327
329	329	331	331	331	333	333	333	333	333
335	337	339	341	343	343	347	347	347	347
349	349	351	351	357	357	359	363	363	365
367	367	369	369	371	371	371	373	375	375
375	375	377	381	385	393	395	397	397	407
407	407	409	411	411	411	413	413	415	415
417	419	419	423	425	425	429	431	431	433
433	437	437	437	439	447	449	461	469	469
469	471	473	473	475	479	481	483	487	489
491	491	491	491	493	493	493	495	497	497
499	501	501	515	515	521	523	523	527	529
529	529	531	531	533	535	537	539	545	547
549	549	551	553	555	555	559	559	561	563
563	563	565	567	567	569	571	573	579	583

int find(int e);

```
Enter command or "command" for list of commands: find
Input integer: 21
21 is not in the array

Enter command or "command" for list of commands: find
Input integer: 100
100 is at index 108

Enter command or "command" for list of commands: _
```

int find_but_better(int e);

```
Enter command or "command" for list of commands: find_but_better
Input integer: 23
23 is not in the array

Enter command or "command" for list of commands: find_but_better
Input integer: 997

997 is at index 999

Enter command or "command" for list of commands:
```

This function is faster than the previous one because it checks the midpoint of the sorted array, checks if the input is greater or less than the selected int at the middle index then finds the center of either side the input is in and repeats until the input is found.