

```
1  /*
2  Author: Munadir Ahmed
3  Date: 4/28/18
4
5  */
6
7  // file: nqueentest.cpp
8
9
10 /*-----
11 All includes here
12 -----*/
13 #include "nqueen.h"
14
15
16 /*-----
17 test bed
18 -----*/
19 void testbed() {
20     nqueen a;
21     for (int i = 4; i <= 8; i = i+4) {
22         cout << "Solving NQueen problem for " << i << "x" << i << " board" <<  ↵
23         endl;
24         a.findAllSoln(i);
25         cout << endl;
26     }
27
28
29 }
30
31 void main() {
32     testbed();
33     cout << endl << "Press Enter to continue..." << endl;
34     cin.get();
35 }
36
37 /*
38 Solving NQueen problem for 4x4 board
39 Solution #1 is:
40 -1--
41 ---1
42 1---
43 --1-
44 Solution #2 is:
45 --1-
46 1---
47 ---1
48 -1--
```

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49
50 Total NQueen problem solution for 4x4 board is: 2
51
52 Solving NQueen problem for 8x8 board
53 Solution #1 is:
54 1-----
55 ----1---
56 -----1
57 -----1--
58 --1-----
59 -----1-
60 -1-----
61 ---1----
62 Solution #2 is:
63 1-----
64 -----1--
65 -----1
66 --1-----
67 -----1-
68 ---1----
69 -1-----
70 ----1---
71 Solution #3 is:
72 1-----
73 -----1-
74 ---1----
75 -----1--
76 -----1
77 -1-----
78 ----1---
79 --1-----
80 Solution #4 is:
81 1-----
82 -----1-
83 ---1----
84 -----1
85 -1-----
86 ---1----
87 -----1--
88 --1-----
89 Solution #5 is:
90 -1-----
91 ---1----
92 -----1--
93 -----1
94 --1-----
95 1-----
96 -----1-
97 ----1---
```

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98 Solution #6 is:
99 -1-----
100 ----1---
101 -----1-
102 1-----
103 --1-----
104 -----1
105 -----1--
106 ---1----
107 Solution #7 is:
108 -1-----
109 ----1---
110 -----1-
111 ---1----
112 1-----
113 -----1
114 -----1--
115 --1-----
116 Solution #8 is:
117 -1-----
118 ----1---
119 1-----
120 -----1-
121 ---1----
122 -----1
123 --1-----
124 ---1----
125 Solution #9 is:
126 -1-----
127 -----1--
128 -----1
129 --1-----
130 1-----
131 ---1----
132 -----1-
133 ---1----
134 Solution #10 is:
135 -1-----
136 -----1-
137 --1-----
138 -----1--
139 -----1
140 ---1----
141 1-----
142 ---1----
143 Solution #11 is:
144 -1-----
145 -----1-
146 ---1----
```

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147  -----1
148  1-----
149  ---1----
150  -----1--
151  --1-----
152  Solution #12 is:
153  -1-----
154  -----1
155  -----1--
156  1-----
157  --1-----
158  ---1----
159  -----1-
160  ---1----
161  Solution #13 is:
162  --1-----
163  1-----
164  -----1-
165  ---1----
166  -----1
167  -1-----
168  ---1----
169  -----1--
170  Solution #14 is:
171  --1-----
172  ---1----
173  -1-----
174  -----1
175  1-----
176  -----1-
177  ---1----
178  -----1--
179  Solution #15 is:
180  --1-----
181  ---1----
182  -1-----
183  -----1
184  -----1--
185  ---1----
186  -----1-
187  1-----
188  Solution #16 is:
189  --1-----
190  ---1----
191  -----1-
192  1-----
193  ---1----
194  -1-----
195  -----1
```

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196  -----1--
197  Solution #17 is:
198  --1-----
199  ----1---
200  -----1
201  ---1----
202  1-----
203  -----1-
204  -1-----
205  -----1--
206  Solution #18 is:
207  --1-----
208  ----1---
209  -1-----
210  ----1---
211  -----1
212  1-----
213  -----1-
214  ---1----
215  Solution #19 is:
216  --1-----
217  ----1---
218  -1-----
219  -----1-
220  1-----
221  ---1----
222  -----1
223  ----1---
224  Solution #20 is:
225  --1-----
226  ----1---
227  -1-----
228  -----1-
229  ----1---
230  1-----
231  -----1
232  ---1----
233  Solution #21 is:
234  --1-----
235  ----1---
236  ---1----
237  1-----
238  -----1
239  ----1---
240  -----1-
241  -1-----
242  Solution #22 is:
243  --1-----
244  ----1---
```

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245  ---1---
246  -1-----
247  -----1
248  ----1---
249  -----1-
250  1-----
251  Solution #23 is:
252  --1-----
253  -----1--
254  -----1
255  1-----
256  ---1----
257  -----1-
258  ----1---
259  -1-----
260  Solution #24 is:
261  --1-----
262  -----1--
263  -----1
264  1-----
265  ---1----
266  -----1-
267  -1-----
268  ---1----
269  Solution #25 is:
270  --1-----
271  -----1--
272  -----1
273  -1-----
274  ---1----
275  1-----
276  -----1-
277  ----1---
278  Solution #26 is:
279  --1-----
280  -----1-
281  -1-----
282  -----1
283  ----1---
284  1-----
285  ---1----
286  -----1--
287  Solution #27 is:
288  --1-----
289  -----1-
290  -1-----
291  -----1
292  -----1--
293  ---1----
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294 1-----
295 ----1---
296 Solution #28 is:
297 --1-----
298 -----1
299 ---1----
300 -----1-
301 1-----
302 -----1--
303 -1-----
304 ----1---
305 Solution #29 is:
306 ---1----
307 1-----
308 ----1---
309 -----1
310 -1-----
311 -----1-
312 --1-----
313 -----1--
314 Solution #30 is:
315 ---1----
316 1-----
317 ----1---
318 -----1
319 -----1--
320 --1-----
321 -----1-
322 -1-----
323 Solution #31 is:
324 ---1----
325 -1-----
326 ----1---
327 -----1
328 -----1--
329 1-----
330 --1-----
331 -----1-
332 Solution #32 is:
333 ---1----
334 -1-----
335 -----1-
336 --1-----
337 -----1--
338 -----1
339 1-----
340 ----1---
341 Solution #33 is:
342 ---1----
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343 -1-----
344 -----1-
345 --1-----
346 -----1--
347 -----1
348 ----1---
349 1-----
350 Solution #34 is:
351 ---1----
352 -1-----
353 -----1-
354 ----1---
355 1-----
356 -----1
357 -----1--
358 --1-----
359 Solution #35 is:
360 ---1----
361 -1-----
362 -----1
363 ----1---
364 -----1-
365 1-----
366 --1-----
367 -----1--
368 Solution #36 is:
369 ---1----
370 -1-----
371 -----1
372 -----1--
373 1-----
374 --1-----
375 ----1---
376 -----1-
377 Solution #37 is:
378 ---1----
379 -----1--
380 1-----
381 ----1---
382 -1-----
383 -----1
384 --1-----
385 -----1-
386 Solution #38 is:
387 ---1----
388 -----1--
389 -----1
390 -1-----
391 -----1-
```



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392 1-----
393 --1-----
394 ----1---
395 Solution #39 is:
396 ---1----
397 -----1--
398 -----1
399 --1-----
400 1-----
401 -----1-
402 ----1---
403 -1-----
404 Solution #40 is:
405 ---1----
406 -----1-
407 1-----
408 -----1
409 ----1---
410 -1-----
411 -----1--
412 --1-----
413 Solution #41 is:
414 ---1----
415 -----1-
416 --1-----
417 -----1
418 -1-----
419 ----1---
420 1-----
421 -----1--
422 Solution #42 is:
423 ---1----
424 -----1-
425 ----1---
426 -1-----
427 -----1--
428 1-----
429 --1-----
430 -----1
431 Solution #43 is:
432 ---1----
433 -----1-
434 ----1---
435 --1-----
436 1-----
437 -----1--
438 -----1
439 -1-----
440 Solution #44 is:
```

```
441  ---1---
442  -----1
443  1-----
444  --1-----
445  -----1--
446  -1-----
447  -----1-
448  ----1---
449  Solution #45 is:
450  ---1---
451  -----1
452  1-----
453  ----1---
454  -----1-
455  -1-----
456  -----1--
457  --1-----
458  Solution #46 is:
459  ---1---
460  -----1
461  ----1---
462  --1-----
463  1-----
464  -----1-
465  -1-----
466  -----1--
467  Solution #47 is:
468  ----1---
469  1-----
470  ---1---
471  -----1--
472  -----1
473  -1-----
474  -----1-
475  --1-----
476  Solution #48 is:
477  ----1---
478  1-----
479  -----1
480  ---1---
481  -1-----
482  -----1-
483  --1-----
484  -----1--
485  Solution #49 is:
486  ----1---
487  1-----
488  -----1
489  -----1--
```

```
490 --1-----
491 -----1-
492 -1-----
493 ---1----
494 Solution #50 is:
495 ----1---
496 -1-----
497 ---1----
498 -----1--
499 -----1
500 --1-----
501 1-----
502 -----1-
503 Solution #51 is:
504 ----1---
505 -1-----
506 ---1----
507 -----1-
508 --1-----
509 -----1
510 -----1--
511 1-----
512 Solution #52 is:
513 ----1---
514 -1-----
515 -----1--
516 1-----
517 -----1-
518 ---1----
519 -----1
520 --1-----
521 Solution #53 is:
522 ----1---
523 -1-----
524 -----1
525 1-----
526 ---1----
527 -----1-
528 --1-----
529 -----1--
530 Solution #54 is:
531 ----1---
532 --1-----
533 1-----
534 -----1--
535 -----1
536 -1-----
537 ---1----
538 -----1-
```

539 Solution #55 is:

540 ----1---

541 --1----

542 1-----

543 -----1-

544 -1-----

545 -----1

546 -----1--

547 ---1----

548 Solution #56 is:

549 ----1---

550 --1----

551 -----1

552 ---1----

553 -----1-

554 1-----

555 -----1--

556 -1-----

557 Solution #57 is:

558 ----1---

559 -----1-

560 1-----

561 --1----

562 -----1

563 -----1--

564 ---1----

565 -1-----

566 Solution #58 is:

567 ----1---

568 -----1-

569 1-----

570 ---1----

571 -1-----

572 -----1

573 -----1--

574 --1----

575 Solution #59 is:

576 ----1---

577 -----1-

578 -1-----

579 ---1----

580 -----1

581 1-----

582 --1----

583 -----1--

584 Solution #60 is:

585 ----1---

586 -----1-

587 -1-----

```
588  -----1--
589  --1-----
590  1-----
591  ---1----
592  -----1
593  Solution #61 is:
594  ----1---
595  -----1-
596  -1-----
597  -----1--
598  --1-----
599  1-----
600  -----1
601  ---1----
602  Solution #62 is:
603  ----1---
604  -----1-
605  ---1----
606  1-----
607  --1-----
608  -----1
609  -----1--
610  -1-----
611  Solution #63 is:
612  ----1---
613  -----1
614  ---1----
615  1-----
616  --1-----
617  -----1--
618  -1-----
619  -----1-
620  Solution #64 is:
621  ----1---
622  -----1
623  ---1----
624  1-----
625  -----1-
626  -1-----
627  -----1--
628  --1-----
629  Solution #65 is:
630  -----1--
631  1-----
632  ----1---
633  -1-----
634  -----1
635  --1-----
636  -----1-
```

```
637 ---1----
638 Solution #66 is:
639 -----1--
640 -1-----
641 -----1-
642 1-----
643 --1-----
644 ----1---
645 -----1
646 ---1----
647 Solution #67 is:
648 -----1--
649 -1-----
650 -----1-
651 1-----
652 ---1----
653 -----1
654 ----1---
655 --1-----
656 Solution #68 is:
657 -----1--
658 --1-----
659 1-----
660 -----1-
661 ----1---
662 -----1
663 -1-----
664 ---1----
665 Solution #69 is:
666 -----1--
667 --1-----
668 1-----
669 -----1
670 ---1----
671 -1-----
672 -----1-
673 ----1---
674 Solution #70 is:
675 -----1--
676 --1-----
677 1-----
678 -----1
679 ----1---
680 -1-----
681 ---1----
682 -----1-
683 Solution #71 is:
684 -----1--
685 --1-----
```

```
686 ----1---
687 -----1-
688 1-----
689 ---1----
690 -1-----
691 -----1
692 Solution #72 is:
693 -----1--
694 --1-----
695 ----1---
696 -----1
697 1-----
698 ---1----
699 -1-----
700 -----1-
701 Solution #73 is:
702 -----1--
703 --1-----
704 -----1-
705 -1-----
706 ---1----
707 -----1
708 1-----
709 ----1---
710 Solution #74 is:
711 -----1--
712 --1-----
713 -----1-
714 -1-----
715 -----1
716 ----1---
717 1-----
718 ---1----
719 Solution #75 is:
720 -----1--
721 --1-----
722 -----1-
723 ---1----
724 1-----
725 -----1
726 -1-----
727 ----1---
728 Solution #76 is:
729 -----1--
730 ---1----
731 1-----
732 ----1---
733 -----1
734 -1-----
```

```
735  -----1-
736  --1-----
737  Solution #77 is:
738  -----1--
739  ---1-----
740  -1-----
741  -----1
742  ----1---
743  -----1-
744  1-----
745  --1-----
746  Solution #78 is:
747  -----1--
748  ---1-----
749  -----1-
750  1-----
751  --1-----
752  ----1---
753  -1-----
754  -----1
755  Solution #79 is:
756  -----1--
757  ---1-----
758  -----1-
759  1-----
760  -----1
761  -1-----
762  ----1---
763  --1-----
764  Solution #80 is:
765  -----1--
766  -----1
767  -1-----
768  ---1-----
769  1-----
770  -----1-
771  ----1---
772  --1-----
773  Solution #81 is:
774  -----1-
775  1-----
776  --1-----
777  -----1
778  ----1---
779  ---1-----
780  -1-----
781  ----1---
782  Solution #82 is:
783  -----1-
```



```
784 -1-----
785 ---1----
786 1-----
787 -----1
788 ----1---
789 --1-----
790 -----1--
791 Solution #83 is:
792 -----1-
793 -1-----
794 ----1---
795 --1-----
796 1-----
797 ---1----
798 -----1
799 ----1---
800 Solution #84 is:
801 -----1-
802 --1-----
803 1-----
804 ----1---
805 -----1
806 ----1---
807 -1-----
808 ---1----
809 Solution #85 is:
810 -----1-
811 --1-----
812 -----1
813 -1-----
814 ----1---
815 1-----
816 -----1--
817 ---1----
818 Solution #86 is:
819 -----1-
820 ---1----
821 -1-----
822 ----1---
823 -----1
824 1-----
825 --1-----
826 ----1---
827 Solution #87 is:
828 -----1-
829 ---1----
830 -1-----
831 -----1
832 ----1---
```

```
833 1-----
834 --1-----
835 ----1---
836 Solution #88 is:
837 -----1-
838 ----1---
839 --1-----
840 1-----
841 -----1--
842 -----1
843 -1-----
844 ---1----
845 Solution #89 is:
846 -----1
847 -1-----
848 ---1----
849 1-----
850 -----1-
851 ----1---
852 --1-----
853 -----1--
854 Solution #90 is:
855 -----1
856 -1-----
857 ----1---
858 --1-----
859 1-----
860 -----1-
861 ---1----
862 -----1--
863 Solution #91 is:
864 -----1
865 --1-----
866 1-----
867 -----1--
868 -1-----
869 ----1---
870 -----1-
871 ---1----
872 Solution #92 is:
873 -----1
874 ---1----
875 1-----
876 --1-----
877 -----1--
878 -1-----
879 -----1-
880 ----1---
881
```

882 Total NQueen problem solution for 8x8 board is: 92

883

884

885 Press Enter to continue...

886

887

888

889 */