

USSR Naval Vessel Inventory Report

Time to complete	Allow 4-6 hours continuous
Program Download	USSRSHIP.Cbl is a model answer. Don't look at this until you have made your own attempt at the program.
Example Output	USSRSHIP.Rpt (The report generated from the Vessel Master File)
Example Input	UVME.Dat (The unsorted USSR Vessel Master File) records)
Major Constructs	Sequential files, SORT with Input Procedure, Print Files, Pre-defined tables, Condition Names

Introduction

The unsorted USSR Vessel Master File (UVMF) contains details of all the sea-going vessels of the SOVIET UNION. The following is the record description.

Field	Type	Length	Value
Vessel Name	X	9	--
Vessel Type	9	2	01-12
Tonnage	9	6	0-999999
Crew	9	5	0-99999
Location Code	X	1	1/2/3/4/5

A program is required to produce a report detailing the major vessels (Vessels of tonnage 3,500 or greater and all submarines) in each of the following locations;

The **P**acific,
The **A**tlantic
The **M**editerranean
The **I**ndian Ocean
The **O**ther Seas

The report must be produced sequenced on ascending Location Code where Location code 1 is the Pacific, code 2 is the Atlantic, code 3 is the Mediterranean, code 4 is the Indian Ocean and code 5 is any Other Seas. Within each location the report must be sequenced on ascending Vessel Type. Each vessel detail line must show the Vessel Name, the Crew size, the Tonnage and the monthly running cost (Crew size * Cost per member).

The cost per crew member is obtained from the following table where the values indicate the running cost in roubles for one month for one crew member;

Monthly Cost Table

L O C A T I O N	Vessel Type												
		1	2	3	4	5	6	7	8	9	10	11	12
	P	2610	2350	2050	0999	2550	2510	0789	0632	0770	0870	0750	0636
	A	2560	2300	0960	0986	2436	2400	0710	0611	0720	0833	0710	0606
	M	2400	2010	0960	0860	2200	2386	0670	0550	0700	0800	0685	0596
	I	2586	2335	2100	0996	2486	2435	0760	0605	0750	0850	0740	0620
	O	2500	2185	0900	0910	2400	2336	0696	0586	0716	0830	0696	0610

The first detail line for each location must also show the Location Name (i.e. Pacific Ocean, Atlantic Ocean, Mediterranean Sea, Indian Ocean, Other Seas) and the first detail line for each Vessel Type must show the Vessel Function. The Vessel Function is obtained from the following table;

Vessel Function Table	
Vessel Type Code	Vessel Function
1	Aircraft Carrier
2	Crusier/Battleship
3	Destroyer
4	Frigate
5	Nuclear Submarine
6	Conventional Submarine
7	Assault Ship
8	Supply Ship
9	Corvette
10	Mine Layer/Hunter
11	Fast Attack Craft
12	Coastal Patrol Craft

Processing

The program will read the USSR Vessel Master File to produce a new file sorted on ascending Vessel Type within ascending Location Code and containing only submarines and vessels of tonnage 3,500 or greater. The program will then read this new sorted file and use it, and the Vessel Function and Monthly Cost tables, to produce the report.

Report Format

See Printout Specification below and the [Example Report](#).

Line2 To be printed at the top of the report only. No page breaks are required so no page heading, page count or line count is required.

Line 5 To be printed at the top of the report only.

Line 7 This is a detail line and is to be printed for each vessel in the sorted file.

The Location Name must be suppressed after its first occurrence until a new Location is encountered.

The Vessel Function must also be suppressed after its first occurrence until a new Vessel Type is encountered.

The Tonnage field must be zero suppressed and be broken into thousands by inserting commas in the correct places.

The Crew field must be zero suppressed and broken into thousands by commas.

1	2	3	4	5	6	7	8	9
1	U.S.S.R. NAVY VESSEL INVENTORY REPORT							
2								
3	LOCATION NAME	VESSEL FUNCTION	VESSEL NAME	TOWNSHIP	COUNTY	MONTHLY COST		
4	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
5			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
6			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
7		XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
8			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
9		XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
10			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
11			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
12			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
13			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
14			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
15			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
16			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
17			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
18			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
19			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
20			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
21			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
22			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
23			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
24			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
25			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
26			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
27			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
28			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
29			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
30			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
31			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
32			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
33			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
34			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
35			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
36			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
37			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
38			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
39			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
40			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
41			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
42			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
43			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
44			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
45			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
46			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
47			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
48			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
49			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		
50			XXXXXXXXXXXXXXXXXXXX	XXXXXXXX	XXXXXX	XXXXXXXXXX		

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