

A. OLAP and Data Warehouse

Consider the following table, called ProjectWorks

Resource	Task	ManHour	Period
Smith	Java	80	Oct 2010
Smith	Haskell	30	Nov 2010
Smith	C++	90	Oct 2010
Jones	Java	30	Mar 2012
Jones	Haskell	60	Mar 2012
Jones	C++	90	Jan 2011
Doe	Java	50	Dec 2011
Doe	Haskell	70	Jan 2012
Doe	C++	60	Feb 2012
Smith	Java	90	Nov 2010
Smith	Haskell	40	Mar 2011
Smith	C++	60	Apr 2012
Jones	Java	20	Jun 2011
Jones	Haskell	80	Jul 2011
Jones	C++	80	Aug 2011
Doe	Java	60	Aug 2011
Doe	Haskell	60	Jul 2010
Doe	C++	70	Sep 2011

and the query

```
SELECT Resource, Task, SUM(ManHour) AS Work
FROM ProjectWorks
GROUP BY Resource, Task
WITH CUBE
```

- 1) Show the result of the query by filling in the table below

Resource	Task	Work
Smith	Java	170
Jones	Java	50
Doe	Java	110
ALL	Java	330
Smith	Haskell	70
Jones	Haskell	140
Doe	Haskell	130
ALL	Haskell	340
Smith	C++	150
Jones	C++	170
Doe	C++	130
ALL	C++	450
Smith	ALL	390
Jones	ALL	360
Doe	ALL	370
ALL	ALL	1120