1.

a.

- i. Names of suppliers if they sell a red part for less than 100
- ii. Does not return anything because first, $\Pi_{\rm sid}$ projects the sids only. Once sids are projected, we cannot project the names from that relation because the relation contains only sids.
- iii. Names of suppliers if they sell a red part for less than 100 and a green part for less than 100
- iv. ID of suppliers that sell red part for less than 100 and green part for less than 100
- v. Names of suppliers that sell a red part for less than 100 and a green part for less than 100