**Minimal FD Set:**

Summit:-

Primary Key: Year

Year🡪type

Year🡪Country

Year🡪city

Event:-

Primary Key: Event\_id

Event\_id🡪name

Event\_id🡪team\_size

Event\_id🡪max\_comp\_teams

Event\_id🡪#rounds

Held\_In:-

Primary Key:- (year,event\_id)

Round:-

Primary Key:- (year, event\_id, roundno, subroundno)

(year, event\_id, roundno, subroundno)🡪 timestamp

(year, event\_id, roundno, subroundno)🡪 location

(year, event\_id, roundno, subroundno)🡪 #teams\_qualified

(year, event\_id, roundno, subroundno)🡪 refree\_id

Registered\_In:-

Primary Key: (year, event\_id, roundno, subroundno,team\_id)

(year, event\_id, roundno, subroundno,team\_id)🡪 record\_id

(year, event\_id, roundno, subroundno,team\_id)🡪 result

Team:-

Primary key:team\_id

Team\_id🡪size

Team\_id🡪country

Team\_id🡪captain\_id

Team\_id🡪coach\_id

Athlete:-

Primary key: Athlete\_id

Athlete\_id🡪name

Athlete\_id🡪gender

Athlete\_id🡪dateofbirth

Athlete\_id🡪height

Athlete\_id🡪weight

Athlete\_id🡪contactno

Athlete\_id🡪nationality

Coach:-

Primary key: coach\_id

coach\_id 🡪name

coach\_id 🡪gender

coach\_id 🡪nationality

coach\_id 🡪dateofbirth

coach\_id 🡪contactno

Referee:-

Primary Key:- Referee\_id

Referee\_id🡪name

Referee\_id🡪gender

Referee\_id🡪dateofbirth

Referee\_id🡪nationality

Referee\_id🡪contactno

**BCNF Proof:**

Since in all relations there is no partial dependency and transitive dependency also every prime and non-prime attribute is

dependent upon the key, hence all table are in BCNF.