**Appendix A**

**UNF**

Carnival(date,director,location,(event), (sponsor\_name, isNaming, amount, contact, phone))

**1NF**

Carnival(date,director,location)

Carnival\_Event(date,event\_name)

Sponsor(date, sponsor\_name, isNaming, amount, contact, phone)

sponsor\_name**->**contact, phonePARTIAL

**2NF**

Carnival(date,director,locationr)

Carnival\_event(date,event\_name)

Carnival\_sponsor(date, sponsor\_name, isNaming, amount)

Sponsor(sponsor\_name, contact, phone)

**3NF**

**There is noTRANSITIVE dependency**

Carnival(date,director,locationr)

Carnival\_event(date,event\_name)

Carnival\_sponsor(date, sponsor\_name, isNaming, amount)

Sponsor(sponsor\_name, contact, phone)

**Appendix B**

**UNF**

Competitor(c\_number, cfname, clname, gender, birthday, email, isStudent, mobile, Medicial(condition, area), Emergency(name, phone\_number, relationship),Guardian(name, phone\_number))

**1NF**

Competitor(c\_number, cfname,clname, birthday, email, isStudent, mobile, efname,elname, ephone\_number, relationship, gfname,glname, gphone\_number)

CompetitorMedical(c\_number, area, condition)

c\_number, area -> condition PARTIAL

ephone\_number ->efname TRANSITIVE

ephone\_number ->elname TRANSITIVE

ephone\_number -> relationship TRANSITIVE

gphone\_number ->glname TRANSITIVE

gphone\_number ->elname TRANSITIVE

**2NF**

Competitor(c\_number, name, gender, birthday, email, isStudent, mobile, condition, area, ename, ephone\_number, relationship, gname, gphone\_number)

CompetitorMedical(c\_number, area)

Medical(area, condition)

**3NF**

Competitor(c\_number, cfame,clname, gender, birthday, email, isStudent, mobile, condition, area, efname,elname, ephone\_number, relationship, gfname,glname, gphone\_number)

CompetitorMedical(c\_number, area)

Medical(area, condition)

Emergency(ephone\_number, efname,elname, relationship)

Guardian(gphone\_number, gfname, glname)

**Appendix C**

**UNF**

Entry(e\_number, \*cnumber, \*event\_name,cname, \*t\_name, \*ch\_name)

Team(t\_name, date)

Charity(ch\_name, \*t\_name)

**1NF**

Entry(enumber,\*cnumber, cname,event\_name, \*t\_name)

Team(t\_name, date)

Charity(ch\_name, \*t\_name)

cnumber ->cnameTRANSITIVE

**2NF**

Entry(enumber,\* cnumber, cname, \*event\_name,\* t\_name)

Team(t\_name, date)

Charity(ch\_name, \*t\_name)

**3NF**

Entry(enumber,\* cnumber,\*event\_name, \*t\_name)

Team(t\_name, date)

Charity(ch\_name, \*t\_name)

**Appendix D**

**UNF**

Order(order\_number,order\_date, date, location, competitor(number, name), merchandise(good1, good2), total\_cost)

**1NF**

Order(order\_number,order\_date, date, location, cnumber, cname, total\_cost, delivery)

Merchandise(order\_number, \*item\_code, item\_description, cost, qty,line\_cost)

date ->location TRANSITIVE

cnumber ->cnameTRANSITIVE

order\_number, item\_code ->item\_description, cost PARTIAL

**2NF**

Order(order\_number,order\_date, date, location, cnumber, cname, total\_cost, delivery)

Buy(\*order\_number, \*item\_code ,line\_cost)

Merchandise (item\_code, item\_description, cost)

**3NF**

Order(order\_number,order\_date, date, cnumber, total\_cost, delivery)

Buy(\*order\_number, \*item\_code ,line\_cost)

Merchandise (item\_code, item\_description, cost)

**Appendix E**

**UNF**

Order(order\_number,order\_date, date, location, volunteer(volunteer\_id, vname), merchandise(good1, good2), total\_cost)

**1NF**

Order(order\_number,order\_date, date, location, volunteer\_id, vname, total\_cost, delivery)

Merchandise(order\_number, \*item\_code, item\_description, cost, qty,line\_cost)

date ->location TRANSITIVE

vnumber ->vnameTRANSITIVE

order\_number, item\_code ->item\_description, cost PARTIAL

**2NF**

Order(order\_number,order\_date, date, location, vnumber, vname, total\_cost, delivery)

Buy(\*order\_number, \*item\_code ,line\_cost)

Merchandise (item\_code, item\_description, cost)

**3NF**

Order(order\_number,order\_date, date, vnumber, total\_cost, delivery)

Buy(\*order\_number, \*item\_code ,line\_cost)

Merchandise (item\_code, item\_description, cost)

Volunteer(vnumber, vname)

**Final Relations:**

Carnival(date,director,locationr)

Carnival\_event(date,event\_name)

Carnival\_sponsor(date, sponsor\_name, isNaming, amount)

Sponsor(sponsor\_name, contact, phone)

Competitor(c\_number, cfame,clname, gender, birthday, email, isStudent, mobile, condition, area, efname,elname, ephone\_number, relationship, gfname,glname, gphone\_number)

CompetitorMedical(c\_number, area)

Medical(area, condition)

Emergency(ephone\_number, efname,elname, relationship)

Guardian(gphone\_number, gfname, glname)

Entry(enumber,\* cnumber,\*event\_name, \*t\_name)

Team(t\_name, date)

Charity(ch\_name, \*t\_name)

Order(order\_number,order\_date, date, \*cnumber,\*vnumber, total\_cost, delivery)

Buy(\*order\_number, \*item\_code ,line\_cost)

Merchandise (item\_code, item\_description, cost)

Volunteer(vnumber, vname)