

VI. LIST OF FIGURES

1. Introduction of disability	1
Figure 1-1 City of Gaza strip.....	3
Figure 1-2 Problem - solution diagram.....	4
Figure 1-3 Thesis structure diagram.....	6
2. Rehabilitation of residential buildings and physical disabilities	13
Figure 2-1 (Source – Household 12)	15
Figure 2-2 (Source – Household 14).....	16
Figure 2-3 (Source – Household 15)	16
Figure 2-4 (Source – Household 17).....	16
Figure 2-5 (Source – Household 19).....	16
Figure 2-6 (Source – Household 19).....	16
Figure 2-7 (Source – Household 19).....	16
Figure 2-8 (Source – Household 22).....	17
Figure 2-9 (Source – Household 25).....	17
Figure 2-10 (Source – Household 30).....	17
Figure 2-11 (Source – Household 35).....	17
Figure 2-12 (Source – Household 39).....	18
Figure 2-13 (Source – Household 47).....	18
Figure 2-14 (Source – Household 53).....	18
3. Universal design and disabilities	19
Figure 3-1 The definition of Universal design(source: internet).....	20
Figure 3-2 Comparisons to Accessible Design(source: internet).....	20
Figure 3-3 Who Benefits from Universal Design(source: internet).....	21
Figure 3-4 Art House (source: internet).....	24
Figure 3-5 First floor for Art House (source: internet).....	24
Figure 3-6 Second floor for Art House (source: internet).....	25
Figure 3-7 The glass in the door (source: internet).....	25
Figure 3-8 A knee space (source: internet).....	26
Figure 3-9 The sink (source: internet).....	26
Figure 3-10 Interior shelving (source: internet).....	27
Figure 3-11 Wire shelving (source: internet).....	27
Figure 3-12 Cold food storage (source: internet).....	27
Figure 3-13 The bottom of both the microwave (source: internet).....	27

Figure 3-14 Safe transfer surface for wheelchair user (source: internet)	28
Figure 3-15 Shower relies on floor slope for drainage (source: internet).	28
Figure 3-16 Aesthetics combined with function (source: internet)....	28
Figure 3-17 The recessed base gives the bed (source: internet).....	28
Figure 3-18 Sekisui House, Ltd. (source: internet).....	29
Figure 3-19 Careful ergonomic studies (source: internet).....	29
Figure 3-20 "Life-long" homes (source: internet).....	30
Figure 3-21 Front entrances maintain traditional (source: internet)...	31
Figure 3-22 Test and demonstration kitchen (source: internet).....	31
Figure 3-23 Social equity (source: internet).....	31
Figure 3-24 The combination soaking tub (source: internet).....	32
4. Case study – Rafah, Palestine	37
Figure 4- 1 Distribution of the study sample by gender.....	39
Figure 4- 2 Sample Distribution by age group.....	39
Figure 4- 3 Distribution of disability by cause	41
Figure 4- 4 Cause of disability	42
Figure 4- 5 Ratio of disability cause in the sample.....	43
Figure 4- 6 who find it difficult to move inside the house.....	43
Figure 4- 7 people who suffer from a disability in the feet.....	44
Figure 4- 8 Type difficulty of moving inside the house.....	44
Figure 4- 9 who have difficulty using Kitchenware.....	45
Figure 4- 10 Those who have difficulty using the toilet.....	45
Figure 4- 11 Those who find it difficult to wear their clothes.....	46
Figure 4- 12 who need help eating.....	47
Figure 4- 13 (source-household 1)	48
Figure 4- 14 (source-household 1)	48
Figure 4- 15 (source-household 1)	48
Figure 4- 16 (source-household 1)	48
Figure 4- 17 (source-household 1)	48
Figure 4- 18 (source-household 1)	48
Figure 4- 19 (source-household 2)	49
Figure 4- 20 (source-household 2)	49
Figure 4- 21 (source-household 2)	49
Figure 4- 22 (source-household 2)	49
5. Recommendations and proposals	50
Figure 5-1 Elements of an accessible entrance.....	51

Figure 5-2 A minimal garage layout	52
Figure 5-3 stair (A,B,C)	53
Figure 5-4 A long stair with a landing	53
Figure 5-5 Principles of step design	54
Figure 5-6 Step dimensions	54
Figure 5-7 Width of a staircase.....	55
Figure 5-8 A straight flight of stairs.....	55
Figure 5-9 A flight of stairs with a landing.....	55
Figure 5-10 Comfortable handrail design.....	55
Figure 5-11 Features of a wheelchair platform lift	56
Figure 5-12 It is best to locate a bathroom near the bedrooms who need help eating.....	57
Figure 5-13 Original layout	58
Figure 5-14 Separate toilet and bathroom converted into a more accessible dual function room	58
Figure 5-15 Separate facilities converted into one bathroom with a wet-area shower	58
Figure 5-16 Front transfer to toilet bowl	59
Figure 5-17 Side transfer to toilet bow	59
Figure 5-18 Hand basin in known-standard wrappers and any other refuse. location close to toilet	59
Figure 5-19 Desirable features in a toilet	60
Figure 5-20 Washbasin layout for adults	60
Figure 5-21 for people in wheelchairs	60
Figure 5-22Removable vanity modules make knee-space available	61
Figure 5-23 Some people prefer capstan head taps	61
Figure 5-24 Mixer taps suit many people	61
Figure 5-25A combination bath and shower with additions designed to make it more accessible	62
Figure 5-26Slip-resistant adhesive.....	63
Figure 5-27Combination bath and shower that may suit some wheelchair-users.....	63
Figure 5-28Wet area shower with no raised hob	65
Figure 5-29Grabrails make it easier to access bathroom fittings.....	63
Figure 5-30A single access-friendly bedroom	67
Figure 5-31A double access-friendly bedroom.....	68
Figure 5-32Background lighting and task lighting.....	69
Figure 5-33Large switches	69

Figure 5-34 Preferred positions of light switches and socket.....	69
Figure 5-35 Proximity switch.....	70
Figure 5-36 Remote control light switch.....	70
Figure 5-37 Socket outlets on a bench-top.....	70
Figure 5-38 Circulation space	71
Figure 5-39 Locating a kitchen for easy access.....	72
Figure 5-40 Locating the kitchen fittings for easy use	72
Figure 5-41 L --shaped kitchen	73
Figure 5-42 U -shaped kitchen layout	73
Figure 5-43 A galley plan kitchen	74
Figure 5-44 It may be important to establish the critical dimensions of the user	75
Figure 5-45 Position equipment so that people can approach it from their preferred side	75
Figure 5-46 Storage accessible to wheelchair Users	75
Figure 5-47 Pull-out adjustable height worktop	75
Figure 5-48 Adjustable height worktop	75
Figure 5-49 Many people prefer to sit while working	76
Figure 5-50 Placing the sink in a corner	76
Figure 5-51 Preferred layout of sink, dishwasher and worktop	76
Figure 5-52 An adjustable height sink	77
Figure 5-53 Knee-space underneath a sink provides for wheelchair access.....	77
Figure 5-54 Indicates the range of storage suitable for most adults.....	77
Figure 5-55 High and low cupboards are difficult to reach	78
Figure 5-56 Mobile storage units are versatile	78
Figure 5-57 A walk-in or wheel-in pantry	78
Figure 5- 58 Slide-out pantries suit a wide range of people.....	78
Figure 5- 59 A tap.....	79
Figure 5- 60 A typical range.....	79
Figure 5- 61 Features of the wall-mounted oven.....	79
Figure 5- 62 Layout of a Cook-top.....	80
Figure 5- 63 The danger of spills.....	80
Figure 5- 64 Laundry arrangement.....	81
Figure 5-65 Low trough setting for ironing board sideways wheelchair access	82
Figure 5- 66 Clear opening width.....	84
Figure 5- 67 Hinged door layout.....	84

Figure 5- 68Elevated view of lift-off hinges used in an emergency.....	85
Figure 5- 69Offset hinge.....	85
Figure 5- 70A bi-fold door.....	86
Figure 5- 71Some double door.....	86
Figure 5- 72A cavity sliding door.....	86
Figure 5- 73D pull handle.....	87
Figure 5- 74User-friendly lever handle.....	87
Figure 5- 75Window options: double hung sash, awning hung and casement sash.....	88
Figure 5- 76 Garden keeps people at safe distance from protruding window.....	88
Figure 5- 77Markings to differentiate glazed panels from openings	88
Figure 5- 78Some window layout considerations	89
Figure 5- 79 If opening sashes are placed behind benches, consider using remote winders.....	90