Our client is a 28- year old female who has had moderate experience with resistance training, and little experience with endurance exercise. She works 5 days a week at a desk job, where she spends the majority of her time sitting for 8-9 hours a day. Her short-term goal is to complete a half marathon in 3 and a-half months and complete a full marathon within 6 months.

| <b>Clients Basic Information</b> |            |  |  |
|----------------------------------|------------|--|--|
| Age                              | 28         |  |  |
| Gender                           | Female     |  |  |
| Weight                           | 60 kg      |  |  |
| Height                           | 5'7 inches |  |  |

| Primary Fitness Test Results |              |  |  |
|------------------------------|--------------|--|--|
| VO2 Max                      | 37 ml/kg/min |  |  |
| Body Mass Index (BMI)        | 20.7         |  |  |
| SO5SF                        | 85           |  |  |
| Blood Pressure (BP)          | 120/85       |  |  |
| Resting Heart Rate (RHR)     | 80           |  |  |
| Grip Strength                | 55 kg        |  |  |
| Push Ups                     | 13           |  |  |
| Sit & Reach                  | 36           |  |  |
| Partial Curl Ups             | 18           |  |  |
| Vertical Jump                | 27           |  |  |
| Leg Power                    | 2400 watts   |  |  |
| Back Extension               | 120 seconds  |  |  |

In order to achieve her goals of completing a marathon, the subject's program design was divided into 3 cycles: macro-cycle, meso-cycle and micro-cycles.

| Macro-cycle  |               |                   |                 |                   |
|--------------|---------------|-------------------|-----------------|-------------------|
| Blocks       | Introductory  | Accumulation 1    | Active Recovery | Accumulation 2    |
| Weeks        | 1 to 5        | 6 to 15           | 16              | 17 to 26          |
| Season       | In season     | In season         | In season       | In season         |
| Frequency of |               |                   |                 |                   |
| Training     | 4 days a week | 4 days a week     | 2 days a week   | 4 days a week     |
| Notes        |               | Pre half-marathon | Rest Period     | Pre full marathon |

| Meso- | Cycle ( Weeks)    |         |           |                   |        |          |         |
|-------|-------------------|---------|-----------|-------------------|--------|----------|---------|
| Week  | Monday            | Tuesday | Wednesday | Thursday          | Friday | Saturday | Sunday  |
| 1     | Walk & Resistance | Rest    | Walk      | Walk & Resistance | Rest   | Walk     | Rest    |
|       | Run/Walk &        |         |           | Run/Walk &        |        |          |         |
| 2     | Resistance        | Rest    | Run/Walk  | Resistance        | Rest   | Run/Walk | Rest    |
|       | Run/Walk &        |         |           | Run/Walk &        |        |          |         |
| 3     | Resistance        | Rest    | Run/Walk  | Resistance        | Rest   | Run/Walk | Rest    |
|       | Run/Walk &        |         |           | Run/Walk &        |        |          |         |
| 4     | Resistance        | Rest    | Run/Walk  | Resistance        | Rest   | Run/Walk | Rest    |
|       | Run/Walk &        |         |           | Run/Walk &        |        |          |         |
| 5     | Resistance        | Rest    | Run/Walk  | Resistance        | Rest   | Run/Walk | Rest    |
|       | Run/Walk &        |         |           | Run/Walk &        |        |          |         |
| 6     | Resistance        | Rest    | Run/Walk  | Resistance        | Rest   | Run/Walk | Rest    |
| 7     | Run & Resistance  | Rest    | Run       | Run & Resistance  | Rest   | Run      | Rest    |
| 8     | Run & Resistance  | Rest    | Run       | Run & Resistance  | Rest   | Run      | Rest    |
| 9     | Run & Resistance  | Rest    | Run       | Run & Resistance  | Rest   | Run      | Rest    |
| 10    | Run & Resistance  | Rest    | Run       | Run & Resistance  | Rest   | Run      | Rest    |
| 11    | Run & Resistance  | Rest    | Run       | Run & Resistance  | Rest   | Run      | Rest    |
| 12    | Run & Resistance  | Rest    | Run       | Run & Resistance  | Rest   | Run      | Rest    |
| 13    | Run & Resistance  | Rest    | Run       | Run & Resistance  | Rest   | Run      | Rest    |
| 14    | Taper             | Rest    | Taper     | Taper             | Rest   | Taper    | Rest    |
|       |                   |         |           |                   |        |          | 1/2     |
| 15    | Taper             | Rest    | Taper     | Taper             | Rest   | Taper    | Maratho |
|       |                   |         | Active    |                   |        | Active   |         |
| 16    | Active Recovery   | Rest    | Recovery  | Active Recovery   | Rest   | Recovery | Rest    |
| 17    | Run & Resistance  | Rest    | Run       | Run & Resistance  | Rest   | Run      | Rest    |
| 18    | Run & Resistance  | Rest    | Run       | Run & Resistance  | Rest   | Run      | Rest    |
| 19    | Run & Resistance  | Rest    | Run       | Run & Resistance  | Rest   | Run      | Rest    |
| 20    | Run & Resistance  | Rest    | Run       | Run & Resistance  | Rest   | Run      | Rest    |
| 21    | Run & Resistance  | Rest    | Run       | Run & Resistance  | Rest   | Run      | Rest    |
| 22    | Run & Resistance  | Rest    | Run       | Run & Resistance  | Rest   | Run      | Rest    |
| 23    | Run & Resistance  | Rest    | Run       | Run & Resistance  | Rest   | Run      | Rest    |
| 24    | Run & Resistance  | Rest    | Run       | Run & Resistance  | Rest   | Run      | Rest    |
| 25    | Taper             | Rest    | Taper     | Taper             | Rest   | Taper    | Rest    |
| 26    | Taper             | Rest    | Taper     | Taper             | Rest   | Marathon |         |

## **Cardiovascular Micro-cycle:**

| Walking | Progression |           |                 |
|---------|-------------|-----------|-----------------|
| Date    | Time        | HRR       | Block           |
| Day 1   | 20 mins     | 55 to 60% | Introductory    |
| Day 3   | 20 mins     | 55 to 60% | Introductory    |
| Day 4   | 20 mins     | 55 to 60% | Introductory    |
| Day 6   | 20 mins     | 55 to 60% | Introductory    |
| Day 115 | 30 mins     | 55 to 60% | Active Recovery |
| Day 117 | 30 mins     | 55 to 60% | Active Recovery |
| Day 119 | 30 mins     | 55 to 60% | Active Recovery |
| Day 179 | 2 miles     | 55 to 60% | Taper           |

| Run/Walk | Progression |     |                |
|----------|-------------|-----|----------------|
| Date     | Time        | HRR | Block          |
| Day 8    | 20 mins     | 65% | Accumulation 1 |
| Day 10   | 20 mins     | 65% | Accumulation 1 |
| Day 11   | 20 mins     | 65% | Accumulation 1 |
| Day 13   | 20 mins     | 65% | Accumulation 1 |
| Day 15   | 25 mins     | 70% | Accumulation 1 |
| Day 17   | 25 mins     | 70% | Accumulation 1 |
| Day 18   | 25 mins     | 70% | Accumulation 1 |
| Day 20   | 25 mins     | 70% | Accumulation 1 |
| Day 22   | 30 mins     | 70% | Accumulation 1 |
| Day 24   | 30 mins     | 70% | Accumulation 1 |
| Day 25   | 30 mins     | 70% | Accumulation 1 |
| Day 27   | 30 mins     | 70% | Accumulation 1 |
| Day 29   | 35 mins     | 70% | Accumulation 1 |
| Day 31   | 35 mins     | 70% | Accumulation 1 |
| Day 32   | 35 mins     | 70% | Accumulation 1 |
| Day 34   | 35 mins     | 70% | Accumulation 1 |
| Day 36   | 35 mins     | 70% | Accumulation 1 |
| Day 38   | 35 mins     | 70% | Accumulation 1 |
| Day 39   | 35 mins     | 70% | Accumulation 1 |
| Day 41   | 35 mins     | 70% | Accumulation 1 |

| Run     | Progression   |         |                |
|---------|---------------|---------|----------------|
|         |               |         | Type of        |
| Date:   | Time or Miles | HRR     | Program        |
| Day 43  | 20 mins       | 75%-85% | Accumulation 1 |
| Day 45  | 20 mins       | 75%-85% | Accumulation 1 |
| Day 46  | 20 mins       | 75%-85% | Accumulation 1 |
| Day 48  | 20 mins       | 75%-85% | Accumulation 1 |
| Day 50  | 25 mins       | 75%-85% | Accumulation 1 |
| Day 52  | 25 mins       | 75%-85% | Accumulation 1 |
| Day 53  | 25 mins       | 75%-85% | Accumulation 1 |
| Day 55  | 30 mins       | 75%-85% | Accumulation 1 |
| Day 57  | 25 mins       | 75%-85% | Accumulation 1 |
| Day 59  | 30 mins       | 75%-85% | Accumulation 1 |
| Day 60  | 25 mins       | 75%-85% | Accumulation 1 |
| Day 62  | 40 mins       | 75%-85% | Accumulation 1 |
| Day 64  | 3 miles       | 75%-85% | Accumulation 1 |
| Day 66  | 4 miles       | 75%-85% | Accumulation 1 |
| Day 67  | 3 miles       | 75%-85% | Accumulation 1 |
| Day 69  | 5 miles       | 75%-85% | Accumulation 1 |
| Day 71  | 3 miles       | 75%-85% | Accumulation 1 |
| Day 73  | 4 miles       | 75%-85% | Accumulation 1 |
| Day 74  | 3 miles       | 75%-85% | Accumulation 1 |
| Day 76  | 6 miles       | 75%-85% | Accumulation 1 |
| Day 78  | 3 miles       | 75%-85% | Accumulation 1 |
| Day 80  | 4 miles       | 75%-85% | Accumulation 1 |
| Day 81  | 3 miles       | 75%-85% | Accumulation 1 |
| Day 83  | 7 miles       | 75%-85% | Accumulation 1 |
| Day 85  | 3 miles       | 75%-85% | Accumulation 1 |
| Day 87  | 5 miles       | 75%-85% | Accumulation 1 |
| Day 88  | 3 miles       | 75%-85% | Accumulation 1 |
| Day 90  | 9 miles       | 75%-85% | Accumulation 1 |
| Day 92  | 4 miles       | 75%-85% | Accumulation 1 |
| Day 94  | 5 miles       | 75%-85% | Accumulation 1 |
| Day 95  | 4 miles       | 75%-85% | Accumulation 1 |
| Day 97  | 11 miles      | 65%     | Accumulation 1 |
| Day 99  | 3 miles       | 60-70%  | Taper          |
| Day 101 | 5 miles       | 60-70%  | Taper          |
| Day 102 | 4 miles       | 60-70%  | Taper          |
| Day 104 | 6 miles       | 60-70%  | Taper          |
| Day 106 | 5 miles       | 60-70%  | Taper          |
| Day 108 | 4 miles       | 60-70%  | Taper          |

| Day 109 | 6 miles    | 60-70% | Taper          |
|---------|------------|--------|----------------|
| Day 112 | 13 miles   | 65%    | Half Marathon  |
| Day 120 | 4 miles    | 70-75% | Accumulation 2 |
| Day 122 | 6 miles    | 70-75% | Accumulation 2 |
| Day 123 | 4 miles    | 70-75% | Accumulation 2 |
| Day 125 | 12 miles   | 65%    | Accumulation 2 |
| Day 127 | 4 miles    | 70-75% | Accumulation 2 |
| Day 129 | 6 miles    | 70-75% | Accumulation 2 |
| Day 130 | 4 miles    | 70-75% | Accumulation 2 |
| Day 132 | 14 miles   | 65%    | Accumulation 2 |
| Day 134 | 4 miles    | 70-75% | Accumulation 2 |
| Day 136 | 7 miles    | 70-75% | Accumulation 2 |
| Day 137 | 4 miles    | 70-75% | Accumulation 2 |
| Day 139 | 16 miles   | 65%    | Accumulation 2 |
| Day 141 | 5 miles    | 70-75% | Accumulation 2 |
| Day 143 | 8 miles    | 70-75% | Accumulation 2 |
| Day 144 | 5 miles    | 70-75% | Accumulation 2 |
| Day 146 | 16 miles   | 65%    | Accumulation 2 |
| Day 148 | 5 miles    | 70-75% | Accumulation 2 |
| Day 150 | 8 miles    | 70-75% | Accumulation 2 |
| Day 151 | 5 miles    | 70-75% | Accumulation 2 |
| Day 153 | 17 miles   | 65%    | Accumulation 2 |
| Day 155 | 5 miles    | 70-75% | Accumulation 2 |
| Day 157 | 8 miles    | 70-75% | Accumulation 2 |
| Day 158 | 5 miles    | 70-75% | Accumulation 2 |
| Day 160 | 19 miles   | 65%    | Accumulation 2 |
| Day 162 | 5 miles    | 70-75% | Accumulation 2 |
| Day 164 | 8 miles    | 70-75% | Accumulation 2 |
| Day 165 | 5 miles    | 70-75% | Accumulation 2 |
| Day 167 | 23 miles   | 65%    | Accumulation 2 |
| Day 169 | 5 miles    | 60-70% | Taper          |
| Day 171 | 8 miles    | 60-70% | Taper          |
| Day 172 | 5 miles    | 60-70% | Taper          |
| Day 174 | 9 miles    | 60-70% | Taper          |
| Day 176 | 3 miles    | 60-70% | Taper          |
| Day 178 | 3 miles    | 60-70% | Taper          |
| Day 181 | 26.2 miles | 65%    | Marathon       |

## **Resistance Micro-cycle:**

| Resistance | Micro-cycle  |
|------------|--------------|
| Days       | Program      |
| Day 1      | Resistance 1 |
| Day 4      | Resistance 2 |
| Day 8      | Resistance 1 |
| Day 11     | Resistance 2 |
| Day 15     | Resistance 1 |
| Day 19     | Resistance 2 |
| Day 23     | Resistance 1 |
| Day 27     | Resistance 2 |
| Day 31     | Resistance 1 |
| Day 35     | Resistance 2 |
| Day 39     | Resistance 1 |
| Day 43     | Resistance 2 |
| Day 47     | Resistance 1 |
| Day 51     | Resistance 2 |
| Day 55     | Resistance 1 |
| Day 59     | Resistance 2 |
| Day 63     | Resistance 1 |
| Day 67     | Resistance 2 |
| Day 71     | Resistance 1 |
| Day 75     | Resistance 2 |
| Day 79     | Resistance 1 |
| Day 83     | Resistance 2 |
| Day 87     | Resistance 1 |
| Day 91     | Resistance 2 |
| Day 95     | Resistance 1 |
| Day 99     | Rest         |
| Day 103    | Rest         |
| Day 107    | Rest         |
| Day 111    | Rest         |
| Day 115    | Rest         |
| Day 119    | Rest         |
| Day 123    | Resistance 2 |
| Day 127    | Resistance 1 |
| Day 131    | Resistance 2 |
| Day 135    | Resistance 1 |
| Day 139    | Resistance 2 |

| Day 143 | Resistance 1 |
|---------|--------------|
| Day 147 | Resistance 2 |
| Day 151 | Resistance 1 |
| Day 155 | Resistance 2 |
| Day 159 | Resistance 1 |
| Day 163 | Resistance 2 |
| Day 167 | Rest         |
| Day 171 | Rest         |
| Day 175 | Rest         |
| Day 179 | Rest         |

Since our subject has a baseline resistance background to begin with, we focused on just maintaining her resistanc training with muscular endurance exercises. Our subject also wanted to only go to the gym once a week, therefore we created resistance training 2 so our subject can train at home.

| Resistance   | Training 1 |        |               |       |               |
|--------------|------------|--------|---------------|-------|---------------|
| Exercise     | Reps       | Sets   | Rest          | Tempo | % of 1 RM     |
| Squat        | 12 to 15   | 1 to 2 | 20-30 seconds | Fast  | 50-75% of 1RM |
| Leg curls    | 12 to 15   | 1 to 2 | 20-30 seconds | Fast  | 50-75% of 1RM |
| Swissball    |            |        |               |       |               |
| crunches     | 30-45 secs | 1 to 2 | 20-30 seconds | Fast  | N/A           |
| Lateral Pull |            |        |               |       |               |
| down         | 12 to 15   | 1 to 2 | 20-30 seconds | Fast  | 50-75% of 1RM |
| Hip          |            |        |               |       |               |
| Extensions   | 12 to 15   | 1 to 2 | 20-30 seconds | Fast  | N/A           |

| Resistance  | Training 2 |        |               |       |
|-------------|------------|--------|---------------|-------|
| Exercise    | Reps       | Sets   | Rest          | Tempo |
| Alternate   |            |        |               |       |
| lunges      | 12 to 15   | 1 to 2 | 20-30 seconds | Fast  |
| Calf raises | 12 to 15   | 1 to 2 | 20-30 seconds | Fast  |
| Abdominal   |            |        |               |       |
| plank       | 30-45 secs | 1 to 2 | 20-30 seconds | Fast  |
| Push up     | 12 to 15   | 1 to 2 | 20-30 seconds | Fast  |
| Side lunges | 20 per leg | 1 to 2 | 20-30 seconds | Fast  |

## Warm-Up

5-10 mins walking at brisk pace *Dynamic Stretching:* 

- Side bends
- Running high knees
- Running butt kicks
- Walking lunges
- Ankle flips

## **Cool-Down**

Walk 5 mins

Static Stretching: Hold 30-60 seconds each

- Standing quad stretch
- Standing hamstring stretch
- Adductor stretch
- Standing ITB stretch
- Kneeling hip flexor stretch
- Standing shin stretch
- Standing calf stretch
- Lying glute stretch